ERIC Document Resume	See Instruction Sheet	DATE OF RESUME	DATE RECEIVED

A. PUBLICATION DATA

1. ERIC NUMBER	2. ORIGINATOR CONTROL NO(S).	3. IDENTIFICATION NO.
ED002454	N.A.	CR 935

4. AUTHOR(S): Downing, Gertrude L. and others

5. TITLE OF DOCUMENT ABSTRACTED: The Preparation of Teachers for Schools in Culturally Deprived Neighborhoods (The Bridge Project)

6. PUBLICATION TITLE: N.A.

7. EDITOR(S): N.A.

8. PLACE OF ORIGIN
ORG. Teachers College,
ST. Columbia University
CITY, STATE New York 27, New York
TELE. EXT.
INST/LOC CODE

9. PUBLISHER OR SOURCE
Queens College of the City of New York,
Flushing, New York

10. VOL.	11. PAGES	12. MO./YR.	13. TOTAL PP.
N.A.	N.A.	7/65	15

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TYPE OF REPORT
PROPOSAL ☐
IN-PROGRESS ☐
FINAL ☒
FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR Report

16. INDEXING TERMS (6-12)

	curriculum	environment	abilities
secondary education	special education	compensatory education	evaluation
teacher education	field instruction	disadvantaged youth	personality
teaching methods	culturally deprived	extracurricular activities	achievement
	neighborhoods	intelligence	

17. ABSTRACT (MAX. 250 WORDS)

Reports on procedures used to discover what modifications would more effectively prepare teachers for work in secondary schools in culturally disadvantaged areas were presented.

A study of the problems of beginning teachers in a depressed-area junior high school showed that problems arose from the teachers' lack of understanding of lower class culture, from their lack of courses appropriate to the abilities and needs of the children, from their lack of individualization of instruction, and from the strains of functioning under school conditions. The creation of a small school-within-a-school in which three teachers and a coordinator worked with three classes of children for three years produced more growth in intelligence and achievement than the usual pupil-teacher assignments in junior high school. The reported decline in IQ scores among slum children was found to be an illusion created by the use of an unsuitable test in the sixth grade. A culture-fair group intelligence test predicted growth in school achievement better than the currently used group intelligence tests, and was therefore a more accurate indication of the potential of disadvantaged children. The intellectual functioning of slum children was found not to differ fundamentally from that of populations on which tests have been standardized. Teachers who administered personality tests to their students reported great immaturity. An exploration of adaptions of curriculum and teaching methods needed to improve instructional effectiveness disclosed such needs as clarity of structure, remedial work, meaningful repetition, and diagnosis and individualization as part of classroom procedures. Studies on the effectiveness of sending undergraduates to work with slum children in after-school centers indicated that this developed greater understanding and more favorable attitudes.

ERIC No.

18. SOURCE OF ABSTRACT

C. FUNDING DATA

19. SUPPORTING ORGANIZATION

20. DIVISION OR DEPT.

21. CONTRACT NO.

PROJECT NO.

22. TOTAL COST OF PROJECT

23. DURATION OF PROJECT

U.S. Department of Health,
Education, and Welfare
Office of Education

ERIC Form 1

ED002454

THE PREPARATION OF TEACHERS FOR SCHOOLS IN CULTURALLY DEPRIVED NEIGHBORHOODS

(The BRIDGE Project)

Cooperative Research Project No. 935

Gertrude L. Downing
Robert W. Edgar, Director, 1963-65
Albert J. Harris
Leonard Kornberg, Director, 1961-63
Helen F. Storen

Queens College
of The City University of New York
Flushing, New York

1965

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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The research reported herein was supported by the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education, and Welfare. Additional support was provided by the Board of Education of the City of New York and the Board of Higher Education of the City of New York, New York Foundation, New York Fund for Children, Taconic Foundation, Nathan Hofheimer Foundation, New York Times Foundation. The Public Education Association acted as sponsor.

This report is dedicated
to the memory of

Leonard Kornberg, Ed. D.
Assistant Professor of Education

Queens College
Flushing, N. Y.

Director, BRIDGE Project, 1961-63

Died, September 23, 1963

It was his desire to make more meaningful the lives of pupils of impoverished backgrounds which motivated this investigation. In spite of his awareness that the end of his life was close and of the constant pain that he suffered, he sought with unceasing energy and high intelligence to develop and carry out plans which would bring diverse human beings together, in this case college students preparing to be teachers and pupils in schools in depressed areas. His commitment to enriched human relations was, and continues to be, an inspiration to his friends, his professional colleagues, and his students.

PREFACE

This report is based on the work of many people. Their names are listed in the following pages. However, the College Committee would like to make special acknowledgements of the contributions of some of them. Without the three teachers in the School Project, Miss Jeannette Doerler, Mrs. Natalie Mintz, and Mr. Kenneth Tewel, there would have been no report. The Committee would like to thank them for serving so faithfully.

The Committee would also like to give special notice to the contributions of Mrs. Richard O. Loengard, member of the Board of Trustees of the Public Education Association, for her efforts in securing funds for the Project and her continuing interest and encouragement.

Three other colleagues also deserve special mention. Dr. Joseph O. Loretan, Deputy Superintendent of Schools of the Board of Education, stimulated the initiation of the Project and gave the Committee the benefit of his insight and experience throughout. It was through the efforts of Dr. John L. Ames, Director of Teacher Education, Queens College, and of Dr. Harry N. Rivlin, Dean of Teacher Education, The City University of New York, that the members of the College Committee were able to engage in this work. Their contributions are also gratefully acknowledged.

The Committee should also like to express its gratitude to Mrs. Rebe Frisch, the Project secretary during its last three years. Her unfailing patience and goodwill as she prepared the numerous drafts leading to the final form of the report contributed substantially to its completion.

The report itself is a product of the total College Committee. All of its members read, made suggestions, often wrote parts, and finally approved all of its contents. However, primary responsibility for the writing of the chapters is as follows: Chapters 2, 3, 6, Appendix E and Appendix G, Gertrude L. Downing; Chapters 1, 7, 12, 13, and Appendix B, Robert W. Edgar; Chapters 8, 9, Appendix C and Appendix F, Albert J. Harris and

Robert J. Lovinger; Chapters 4, 5, 11 and Appendix A, Helen F. Storen. Chapter 10 and Appendix D were prepared by Carl Auria, based on a partial draft by Robert W. Edgar and on materials prepared by Irving Robbins, as well as on original materials.

The Committee also wishes to thank Mrs. Lee R. Cogan, Official Publications Editor of the College, for her assistance in editing the final report.

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Part I

PROBLEMS, PURPOSES, AND PROCEDURES

Chapter 1

History and Overview

Origins of the Proposal

The decision of the United States Supreme Court on May 17, 1954 (Brown v. Topeka) declaring unconstitutional laws segregating races in public education had an important impact on the schools in New York City. Though neither the State nor the City had segregation laws, educators were stimulated to re-examine the educational process to see whether or not practices inadvertently violated the spirit if not the letter of the equal treatment doctrine.

About a month after the Supreme Court decision, Dr. Kenneth B. Clark, Professor of Psychology at City College, in the presence of members of the Board of Education of the City of New York, made a series of charges against the schools claiming that the City did in fact provide poorer education for the children in the slum ghettos than for children in the more prosperous areas. Among his accusations was the statement that the City tolerated a rapid turnover of teachers in schools which were populated primarily by Negro and Puerto Rican children.

In response to these criticisms the Board of Education asked the Public Education Association, a civic group organized to work for the improvement of the schools, to study school practices as they affected Negro and Puerto Rican children. The Public Education Association then called on the New York University Research Center for Human Relations to conduct an inquiry. In October 1955, the N.Y.U. Research Center reported its conclusions (30).* Among its findings were the following: "If tenure, probationary and substitute status are measures of competency, Group X (schools with eighty-five percent or more Negro and Puerto Rican children) school teachers are not as competent as Group Y (schools with eighty-five percent or more white children) teachers because fewer of them are on tenure and more of them have probationary or substitute status. Also teacher turnover is more rapid in Group X schools than in Group Y schools." (30) Thus Clark's charge concerning teachers appeared to have been sustained.

---

*Numbers in parentheses refer to the publications listed in the Bibliography at the end of the report.

In addition to authorizing the Public Education Association to make this investigation, the Board of Education created (December 1954) a Commission on Integration composed of several of its own members, professional educators drawn from its permanent staff, and interested civic leaders. The Commission, instructed to study various aspects of the integration problem, divided itself into several subcommissions. One such subcommission was assigned to examine teacher assignment and personnel. About a year after the Public Education Association report, the findings of this subcommission were made public. Its report corroborated the statements of the PEA report and made a series of recommendations designed to induce and/or to require regularly licensed teachers to accept assignments in the *de facto* segregated schools. Certainly the need for a greater number of highly qualified teachers in the slum-ghetto schools had been unequivocally established.

The teacher training institutions of The City University were cognizant of these problems and had begun to modify their programs for the purpose of encouraging more of their undergraduates to prepare to teach in difficult schools. At Queens College the program of field experiences, both in social agencies and in the public schools, emphasized increasing the amount of contact between children and youth of the slum-ghetto areas and prospective teachers. Perhaps the most important development at this time was the placement of student teachers in schools in low socio-economic areas for at least part of their pre-service teaching experience. However, in the fall of 1958, Dr. Joseph O. Loretan, at that time Associate Superintendent of Schools of New York City in charge of the junior high school division, met with a group of members of the Queens College Department of Education who were concerned with the preparation of teachers for the junior high schools. He chided them for educating middle class youth to teach in suburban or middle class city schools and challenged them to make a more intensive attack on the problem of interesting prospective teachers in teaching children in depressed areas. One aspect of his statement which attracted special attention was that the IQ scores of these children, as measured by group intelligence tests, declined as they proceeded through the school system. College staff members were curious to know whether or not this decline could be reversed. Concerning Dr. Loretan's charge, however, the College members, not attempting to defend the efforts they had already made, agreed with Dr. Loretan that the need for teachers in difficult schools was urgent and that a more formal examination of the complexities of the problem of preparing them ought to be undertaken.

Under the leadership of Dr. Leonard Kornberg and Dr. Helen Storen, planning began in the spring of 1959. In very general terms Kornberg and Storen thought that a program should be devised which would highlight the daily problems which recent graduates of the College face in their classroom teaching. They, desiring to avoid the ivory tower pronouncements, thought that proposals to modify the teacher education program should reflect the realities of teaching in difficult schools.

In order to broaden the base of the College Committee, Dr. Albert J. Harris, director of the Educational Clinic, and Dr. Robert W. Edgar were added to it. With the addition of these two members, all the major divisions of the department's secondary school program--methods, psychology, and foundations--were represented, along with the special resources of the department's clinic. Dr. John L. Ames, director of teacher education at Queens College, and Dr. Harry N. Rivlin, dean of teacher education in The City University, acted as advisers to the Committee throughout the planning stages. By the spring of 1960, the Committee had sufficiently crystalized its ideas to begin the effort to raise funds.

The Problem and Its Significance

The planners of the project defined their primary problem as one of finding ways of more effectively preparing teachers to work in schools in culturally deprived neighborhoods. They agreed that the existing evidence supported the conclusion that teachers avoided difficult schools and that this avoidance pattern was shared by prospective teachers. They were aware that the logic of the students' personal histories supported such avoidance. College admission requirements eliminated the academically incompetent, narrowing the majority of qualified students to the products of families which were either middle class in fact or in aspiration. Queens students grew up in environments which rewarded academic performance highly. They learned skills, both academic and social, which functioned best in an educated, professionally-oriented milieu. In addition they were deeply committed to the American tradition of viewing success as escape from lower class origins. Many of their families had in the last generation moved from the central city slums to the middle class areas within the city or to the out-of-city suburban developments. To choose to work in schools in depressed areas was contrary to their normal career expectations.

On the other hand, many Queens students had strong idealistic tendencies and were imbued with a desire to serve their fellow men. The moral quality of the current revolution in interracial relations appealed to their sense of democratic equality and justice. In this period, this idealism has manifested itself in many ways. Students have voluntarily established centers to assist culturally handicapped youth in their studies. One group spent the summer of 1963 in Prince Edward County, Virginia, teaching Negro children who had gone without schooling for four years. One of the civil rights workers murdered in the summer of 1964 in Mississippi was a Queens College student.

Conscious of the existence of this idealism, the staff was convinced that many of the students, though torn between their desire to teach in the "best" schools and their dedication to a life of service to the underprivileged, would respond to a call for service. If the College's call to service was to be a responsible act, it would have to support this idealism by designing a plan of study and experience which would make it possible for these young people to meet the problems of teaching in difficult schools with sufficient skill and understanding to achieve a sense of success and of worth. Their desire to serve should not be frustrated by failure and disillusionment. Teacher education courses, as a sequence of academic and field experiences which try to relate an individual's general and specialized education to the professional concerns of a teacher, are often charged with being "unrealistic" and "impractical." If the Project Committee was to contribute to a more relevant program of study, it would have to design an investigation which would reveal the kinds of knowledge and experience, attitudes and understandings, which would more effectively prepare the prospective teachers for responsibilities in schools located in low socio-economic urban areas than the current preparatory program did.

Preliminary Theory and Hypotheses

The first efforts of the Planning Committee were devoted to an elaboration of those hypotheses which, upon investigation, might have important implications for the pre-service program. The members felt that the Project, reflecting present thinking about teaching the educationally disadvantaged, should be a testing ground for these assumptions about the learning process. Then whatever proposal for modification of the teacher education program might later be made, they would have a realistic base. The committee developed the following preliminary assumptions:

Possibilities for Effective Teaching in the Junior High School

1. Goals must be set that realistically relate to pupils' abilities and skills, and that make success possible. (Can provision be made for improving the skills of reading, language usage, and reasoning ability while teaching the required content of the subject areas? Will greater interest and deeper understanding be developed in a subject if more emphasis is given to certain of the required units or topics? When is vicarious experience more effective than direct experience?)
2. A non-judgmental recognition of these children's difficulties and confusion will encourage them to learn. Many have been so often exhorted with meaningless words that matter-of-factness and concrete orientation

might be a relief. (How would one explain clearly and with tact the classroom limits and expectations and the student's progress? What arrangements, schedules, "briefing" sessions, and individualized patterns of work and evaluation would be effective?)

3. The correlation and integration of the subject areas, i.e., English, social studies, mathematics, science, will make the material more meaningful to these students. They badly need continuity and coherence in their learning experiences. (How can the "departmental" classes of a junior high school best be modified so as to provide this?)
4. A curriculum design which would reduce the number of adults teaching these students would allow greater individualization, and would enhance learning. (Would it be better for these students to have the same group of "academic" teachers for the three junior high school years?)
5. These students need to have assurance that what they feel and understand is accepted, and that in school there is room to work out misconceptions. (What teacher attitudes would let these students be "for real," and not bound by middle-class standards? What instructional content would help them confirm the reality of their feelings and percepts--e.g., literature that would heighten the awareness of oneself?)
6. A focus on immediate and personal relationships in the community may be too narrow and intellectually limiting, and that, in effective teaching, imagination must also be stimulated. (What classroom activities would enlist these students' dreams--their being a "big guy," and thus widen for them the meaningfulness of school?)
7. These students will work productively when they care for a teacher who cares for them, who asserts himself generously and in clear terms,

and whose faith in their potentialities becomes contagious. (How does a teacher achieve this without threatening them by too quick a personal approach? How can he help them feel less isolated and able to work cooperatively with each other? Are current teaching methods such as committee work and small group project premature for such children?)

8. Supportive supervisory conditions and flexible curriculum patterns will encourage teachers to be more imaginative and stimulating with these students and to feel professionally rewarded.

The Four Studies

An organizational framework within which the Project planned to operate was developed from this analysis. Originally three studies were outlined. A fourth evolved during the initial period of implementation. The original three were:

1. A curriculum study. A number of educationally disadvantaged children in a New York City junior high school would be organized into a "small-school-within-a-school" to serve as a laboratory to experiment with teacher-learning assumptions.
2. A psychology study. A series of intelligence tests--both individual and group, personality tests, and achievement tests would be administered to educationally handicapped children to discover their intellectual resources and to ascertain whether or not significant changes in test scores had occurred in the course of the study.
3. A teacher-education study. A program of involvement of members of the Queens College Department of Education would be set up on the assumption that confrontation with the problems of teaching in a difficult school would bring re-examination and modification of various aspects of the College program.

Dr. Leonard Kornberg, who played a key role in devising the original proposal and had been named the first director of the Project, later recommended a fourth study.

Inasmuch as students in his courses in educational psychology were required to spend one two-hour period per week during the academic year leading or assisting the leadership of a youth group in a community center, he suggested a plan which would give this experience a school setting. Consequently, a fourth dimension was added.

4. A field experience study. Prospective teachers would be asked to participate in informal, after-school programs with pupils in so-called "difficult" schools. An investigation would be made to ascertain whether or not this experience was as effective as the social agency field experience currently required in developing understanding of the educationally disadvantaged youth and favorable attitudes toward teaching them.

As the Project evolved, the first two studies merged to become the "Demonstration Project," while the fourth was referred to as the "Bridge Groups." In this report we have designated them the "School Project" and the "After-School Project" to facilitate the reader's task of keeping them separate. That part of the Project which was focused on the College teacher education program was too disparate in its activities and too intertwined with the other two aspects to receive a designation of its own. The whole was formally named the BRIDGE Project to symbolize its effort to bridge the barriers between middle class instructors and students and the pupils in the "difficult" schools. As an afterthought the letters of BRIDGE were attached to a larger title, Building Resources of Instruction for Disadvantaged Groups in Education.

Securing Financial Resources

Planning began in the fall of 1958, and the first proposals were drawn up in the spring of 1959. It was obvious that substantial funds, both from the City and from other sources, would be needed. Dr. Harry N. Rivlin, dean of teacher education in The City University, and Dr. John L. Ames, director of teacher education at Queens College, were able to arrange partial support for the research in the form of released time for members of the College staff. Provision was made to release the director of the Project from two-fifths of his regularly assigned schedule and two other members of the Committee from one-fifth of their teaching duties. This amounted to approximately four-fifths of an associate professor's salary for four years, estimated in the original budget as costing $40,000.

Dr. Joseph O. Loretan, then associate superintendent of schools, arranged for the participation of the public schools in the financing of the Project. The Board of Education provided the three teachers which the Project plans called for and the school facilities to house the small-school-within-a-school. Throughout the three years of the school demonstration, a classroom for meetings and in-service work was made available, as well as office space for the Project psychologist. Other miscellaneous services were also rendered. The expenditures by the school system were considerable, but it is impossible to arrive at a precise figure in dollars for what the school system spent.

In order to obtain additional funds, the Planning Committee approached both the U.S. Office of Education and private foundations in the metropolitan area. In June 1960, application was made to the Department of Health, Education, and Welfare under the provisions of Public Law 531, 83rd Congress, and the following November a contract was signed. The federal government agreed to pay the salaries of both the coordinator in the junior high school and the staff psychologist for three years at an estimated cost of $66,700.

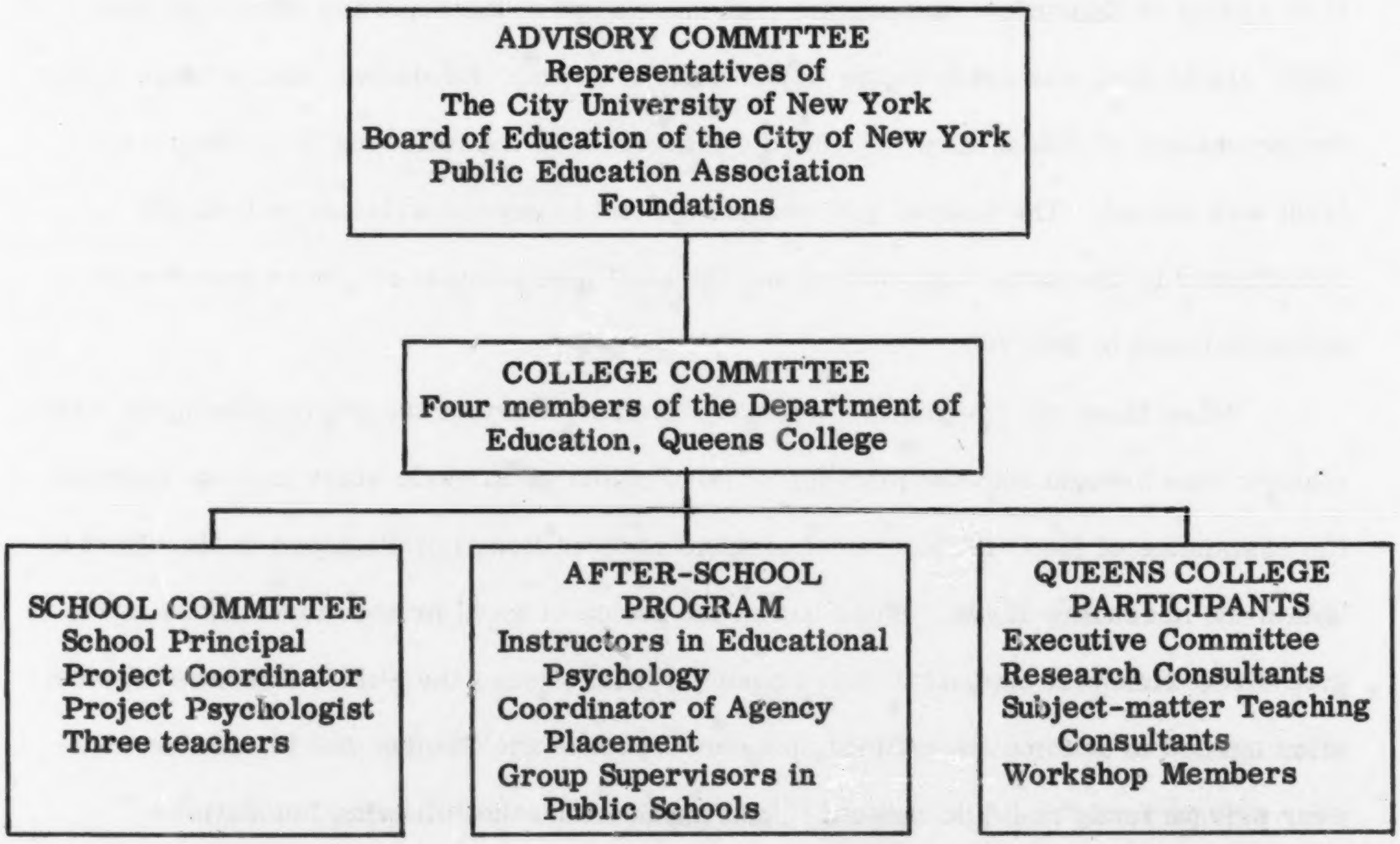
Miss Mary M. Hoagland, then executive secretary of the Public Education Association, was brought into the planning of the Project at an early stage and she enlisted the assistance of Mrs. Richard O. Loengard of their Board of Trustees in the effort to obtain the necessary funds. Since it was the policy of local private foundations not to give direct financial support to tax-supported institutions, the Public Education Association agreed to become the official sponsor of part of the Project and to receive whatever private funds could be raised. Upon application, the following foundations contributed the following amounts:

New York Foundation	**$25,000**
New York Fund for Children	**25,000**
Taconic Foundation	**20,000**
Nathan Hofheimer Foundation	**20,000**
New York Times Foundation	**1,000**

These funds made participation of other College staff members possible and provided secretarial service, evaluation and statistical services, supervisors of the BRIDGE Groups, publications, curriculum materials, and many miscellaneous items.

The Organizational Structure

The administrative organization of the BRIDGE Project was based on the relationship of the College Committee to its advisers and sponsors on the one hand and to those engaged in its actual implementation of the Project on the other. The following chart will help the reader visualize the framework.


ADVISORY COMMITTEE
Representatives of
The City University of New York
Board of Education of the City of New York
Public Education Association
Foundations
COLLEGE COMMITTEE
Four members of the Department of Education, Queens College
SCHOOL COMMITTEE
School Principal
Project Coordinator
Project Psychologist
Three teachers
AFTER-SCHOOL PROGRAM
Instructors in Educational Psychology
Coordinator of Agency Placement
Group Supervisors in Public Schools
QUEENS COLLEGE PARTICIPANTS
Executive Committee
Research Consultants
Subject-matter Teaching Consultants
Workshop Members

Meetings of the Advisory Committee had two fundamental functions: (1) To keep sponsoring agencies informed of the activities and progress of the Project, and (2) to make available to the College Committee advice and assistance from key personnel in the administrative structures of both the public schools and The City University. The members met annually to review the work of the Project. In addition, Dr. Joseph O. Loretan, who assumed special responsibility for maintaining liaison between the Project and the public schools, met with the College Committee twice each year to review progress, plans, procedures, and problems.

The College Committee consisted of four members of the Queens College Department of Education. Three of them, Profs. Robert W. Edgar, Leonard Kornberg, and Helen F. Storen, taught in the sequence of courses designed for prospective secondary school teachers. Prof. Albert J. Harris, the fourth member, was then director of the Department's Educational Clinic. The Committee was responsible for the implementation of all aspects of the Project. Its members supervised the School Project, the After-School Project, the participation of other department members, and the general administration of the Project.

The School Committee consisted of the principal of the Project school and the full-time workers participating in the school part of the BRIDGE Project. This Committee dealt with the day-to-day problems arising out of the need to fit the BRIDGE Project into the general patterns of school organization and functioning. In actual practice the College Committee participated in almost all of the meetings of this group.

The administration of the After-School Project was primarily in the hands of Dr. Leonard Kornberg until his death in September 1963. He was assisted by Mrs. Lawrence Brody, a social worker employed by the Department to supervise the total field placement program. After his death she assumed the complete responsibility. Supervision of the College students in the after-school program also involved two other groups: (1) the College instructors of educational psychology who cooperated in the placement of the undergraduates registered in their courses in the After-School centers and helped

them to organize the learning of their field experience through small group and class discussion, and (2) the on-the-job supervisors who, being public school personnel, made the local administrative arrangements, enlisted the participation of the pupils, supervised the programs, and followed up the college students' group activities with conferences.

ORGANIZATIONAL CHRONOLOGY

The time table for the Project was set up as follows:

February 1 - September 1, 1961

School Project	After-School Project	College Aspects
Selecting three teachers, coordinator, and staff psychologist.	**Crystalizing plans for the participation of College undergraduates in after-school centers.**	**Conducting a conference on the difficulties of beginning teachers in the difficult schools in the New York City public school system**
Organizing the administrative structure of the small-school-within-a-school at the Project school.		
Conducting a workshop to develop a common philosophy and understanding of purposes, curriculum plans, and methods of working together among the College and school participants.		

September 1, 1961 - September 1, 1962

School Project	After-School Project	College Aspects
Administering individual intelligence tests to all entering seventh graders in the Project school, both the experimental and control groups.	**Trying out the after-school centers with students drawn from Dr. Kornberg's classes in educational psychology.**	**Developing the technique of the weekly case study and curriculum planning.**
Administering the Metropolitan Achievement Test in both fall and spring to experimental and control groups in the Project school and the second control group in a junior high school in Manhattan.		**Selecting staff members for temporary assignments.**

September 1, 1962 - September 1, 1963

School Project	After-School Project	College Aspects
Administering for the third time the Metropolitan Achievement Test to the experimental and control groups in the Project school, May 1963. Administering group tests of intelligence, personality tests, and other instruments to get further information on the functioning of the children in the experimental group.	Formally evaluating the after-school project by means of placement of a random sample of students from classes in educational psychology in after-school centers and comparing their reactions and growth with a comparable group in social agencies.	Conducting a workshop on reading for the members of the College secondary education committee.

September 1, 1963 - February 1, 1965

School Project	After-School Project	College Aspects
Administering for the second time individual intelligence tests to the experimental and control groups in the Project school. Administering for the fourth time the Metropolitan Achievement Test to the experimental and control groups in the Project school, and the second round to the control group in a junior high school in Manhattan.	Analyzing and reporting the data on the evaluation of the BRIDGE Groups by the research psychologists conducting the study. Conducting follow-up studies of BRIDGE Group participants in student teaching and in first teaching experience.	Writing final report. Discussing results with the Department of Education, the secondary education committee, the interested public school officials, and the Advisory Committee.

The School Project in Brief

The primary purpose of the School Project was to provide an opportunity for the College participants to study the problems of recent graduates of the teacher education program as they taught in difficult schools in relatively poor neighborhoods. The planners of the study decided that intensive investigation of a few teachers working with a limited number of pupils would be more productive of insights than more extensive efforts based on the examination of the work of many teachers with hundreds of pupils under varied conditions. This decision was based on the conviction that genuine appreciation of the teachers' difficulties necessitated an understanding of the children whom they taught. Consequently the investigation of the problems of teaching in a difficult school was focused on the efforts of three teachers, aided by a coordinator, in teaching three classes of children for three years.

Subsidiary to this main purpose, but still very important to the planners, was the try-out of two ideas concerning teaching in difficult schools: (1) Beginning teachers need the strong support of a coordinator or supervisor who can direct their efforts in paths which are most likely to be effective; who can help them gain skill and insight as they engage in a sustained program of in-service education; and who can relieve them, in emergencies, of burdens at points when problems become too difficult for them to face. (2) Administrative arrangements which maximize the amount of time that teachers and youth spend together and yet acknowledge the teacher's special expertness in a single academic field will enhance the growth of both teachers and pupils. Deriving a structure from these hypotheses, the planners created a small-school-within-a-school in which three teachers taught the four main academic subjects of the junior high school to the same eighty-five pupils for a period of three years under the guidance of a coordinator.

A decision to limit the investigation still further was also made. In the judgment of the planners it was advisable at this time to study the problems of teachers of English, math, science, and social studies. These four subjects are not only the basic studies of the junior high schools years, but they are also the areas in which most of the undergraduates at Queens College are preparing to teach. Ordinarily the number of classroom teachers would have been four. However, since it was also considered desirable to have each teacher concentrate all of her efforts on the eighty-five pupils within the small-school pattern, a further delimitation was adopted. Since it is the usual practice in New York City junior high schools to assign only two or three periods a week to general science in the seventh and eighth grades and since the investigation was to be focused on only three classes of children, a teacher specializing solely in science would have to be assigned other children. On the other hand, a combination of math and science teaching would produce a full program for one teacher. Thus a combination of these two subjects was adopted.

Three teachers were selected, two women and one man. All three were graduates of the teacher education program at the College. The social studies teacher was in the process of completing his student teaching at the Project school in the spring of 1961. He was graduated that June from the College and began his teaching as a member of the Project team. The English teacher had completed her undergraduate preparation in June 1960, a year before the Project began. She had voluntarily chosen to teach in the Project school in the fall of 1960 and consequently had had one year of experience in the Project school in the fall of 1961. The science teacher, who also accepted responsibility for teaching mathematics, had been graduated from the College with the Class of 1958. Since that time she had spent a year in graduate studies in science and had taught science for a year-and-a-half in a Queens junior high school which was attended primarily by middle class pupils. Her experience had been entirely in the teaching of science. Thus, though she had had some teaching experience, she was a beginner in two ways: this was her first assignment to teach math, and she was teaching for the first time in a difficult school. All three teachers had achieved excellent records in the undergraduate program. All three remained in the Project until the conclusion in June 1964. At this date (February 1965) two of them are still teaching in the same school.

One extension of the original plan should be mentioned. In the second and third years of the School Project student teachers were placed with the Project teachers and student observers were admitted to their classrooms. The College Committee had assumed that the Project teachers, relatively inexperienced when the Project began, would be overburdened if they were under constant observation by and had to work with undergraduates as well as perform their classroom duties. In the second year the teachers expressed a willingness to work with students from the College and a limited program of observation and student teaching was developed.

The Project school is located in South Jamaica, a Negro ghetto area. In 1960, 86 percent of the residents of the school district were Negroes. This contrasted with 8 percent for the entire borough. Of the remainder only 1 percent were classified by the Census as Puerto Rican while 13 percent of the population were classified as white.

The district has the characteristics of a poorer section of the City. The housing is poor. Most of it consists of single dwellings--attached, semi-attached, or detached--in deteriorated condition. Many of them were built about forty years ago for white working class residents. Since that time, as indicated above, the racial composition of the area has changed. The district does not, however, fit the stereotype of a large urban slum. Almost all of the housing is less than three stories high. There are individual dwellings and small residential areas of recently constructed housing which mark the presence of a substantial group of middle class Negroes.

The typical worker of the area is a manual worker. About one-third of the female workers are in the category of private household workers, while most of the male workers are classified as unskilled, semi-skilled, or skilled. The median income for families in 1960 was about $4,500, almost $2,700 less than the borough median. The educational level of the area residents is fairly high, the Census Bureau reporting a median attainment in 1960 of 9.7 years. This figure, however, is more than a year below the borough average.

The strength of the family structure is difficult to judge from the Census reports. The most meaningful statistic in the Census report is that 66 percent of the children in the school district live with both parents as compared to 90 percent in the borough as a whole. This difference indicates the presence of many incomplete families with a large number of families without a male head.

The Project school reflects its district. Though the Census reported the presence of some whites in the area, there were none in the school. A few Puerto Rican pupils were in attendance. A study of pupil transiency (17) reported that this school had the highest transiency rate of any junior high school in Queens, over 50 percent. This figure means that the number of pupils who entered or left the school during one year was over half the total number attending the school. The statistic is somewhat misleading for it does not mean that over half of the pupils changed schools. Some pupils change schools several times during a school year. Their mobility exaggerates the apparent number of pupils who are involved. Even with this factor taken into account, however, the amount of movement is great and heightens the difficulties of educating these children.

The depressed character of the pupil population is officially recognized by the New York Board of Education: the school is both a "Special Service" and "Higher Horizons" school. Such schools are considered eligible for added educational services because of the needs of the pupils. The words of Dr. Jacob Landers, coordinator of the Higher Horizons Program, fit these children:

> They suffer from all the ills which a modern society can visit upon the children unfortunate enough to live in its decaying areas. Many of the families receive Welfare assistance, and even more of the children receive free lunch. A high proportion come from broken homes. Many of them are latch-key children, wearing around their necks the key which is mute evidence of an empty apartment when they return from school. (21)

In addition, these children are academically retarded, testing on the average about two years below grade level in both reading and arithmetic.

In 1961, this school was housed in a five-story redbrick building about forty years old. Built in response to the growth in population in the area after World War I, it was first an elementary school and then was converted into a junior high school. In June 1963, the junior high school pupils were moved to a new building, designated J.H.S. 8, and J.H.S. 40 was reconverted to an elementary school. Compared to other City schools, it was relatively small, having an enrollment of about 1,100 pupils. The standard curriculum of a New York City junior high school was offered: English, math, science, social studies, health education, art, and music supplemented by a program of shop work and home economics. A few students were given language instruction in the ninth grade.

The BRIDGE Project introduced no formal changes in the offerings for the children involved. As described above, the primary modification was the creation of a small-school-within-a-school in which, within the limits of the transiency rate, eighty-five pupils were taught by the same three teachers four academic subjects for three years. It was in this setting, a traditionally organized school in an old building in a socially and economically depressed area, that the School Project of the BRIDGE Project began its operations in the fall of 1961.

The After-School Program in Brief

The primary purpose of this aspect of the BRIDGE Project was to bring the Queens College undergraduates into meaningful contact with the young adolescents who attend schools in the depressed areas of the City. The teacher education program at the College has traditionally included field experience in all its courses. For those preparing to teach in the secondary schools, school visits are included in the first education course. In educational psychology, which follows the introductory course, the field experience has taken the form of service in a youth agency. Finally, the courses in classroom methodology include requirements for observation of and participation in public school teaching. Consequently the problem as the planners of the BRIDGE Project saw it was not to provide more practical experience, but to ensure that the field experience would bring the undergraduates in contact with youngsters who attend schools in depressed areas.

In 1960, Dr. Leonard Kornberg began to place some of his students in After-School Programs rather than in youth agencies unrelated to the schools. His experiment was a response both to the need of the public school pupils for help and the need of the Queens College students for experience with these youngsters.

The After-School Centers appeared to have several possible advantages for a program of teacher preparation:

1. The pupils who attended would be drawn from schools in low-socio-economic areas and would be more or less typical of the pupils of the most difficult schools in the City.

2. The College could give more direction to the program if it paid the supervisors of the After-School programs.

3. The activity groups within the programs could be kept small, thus making certain that the discipline problems would not be too difficult for inexperienced students.

4. Close liaison could be maintained with the supervisors. They could participate with the College staff members in planning the development of a program tailored to fit the needs of undergraduates preparing to be teachers.

5. The school setting would give the undergraduates a greater sense of the relationship of his field experience to teaching than would the other field placements.

After the initial try-out period of experimentation, the BRIDGE Project Committee organized several After-School Centers. The largest number in operation at any one time was five, though six junior high schools were used during the three-years of the Project. Four of the schools were in Queens, two of them primarily attended by Negroes and two with more heterogeneous student bodies. The other two were located in Manhattan. Their student bodies reflected the ethnic mixture of the central City depressed areas.

An After-School Center consisted of approximately ten activity groups, each led by a Queens College undergraduate with a supervisor in general charge. The activities were primarily tutorial in nature, but an intensive effort was made to interpret tutoring broadly to include cultural enrichment as well as intensive study of some isolated skill. Though there were reports that the policy was occasionally violated in spirit, attendance was supposed to be voluntary. During the three years of the Project approximately 1,100 pupils attended the Centers for periods of time ranging from one to twenty sessions.

During the three years, about 170 college students served as group leaders in the After-School Centers. They went in groups of ten to the schools where they were each assigned to small groups of pupils. They organized activities with the children and at the conclusion of each session they met with the After-School Center supervisor to analyze their experiences and to make plans for the future. Their experiences were also woven into their studies of adolescent growth and development at the College both during class sessions and in specially organized small-group discussions.

In the final year of the Project, the New York City Board of Education established after-school tutorial centers in the "Special Service" schools of the City. These centers which were manned by licensed teachers and paid for from the regular school budget, displaced the Queens College centers. The After-School Plan was, therefore, at least temporarily, abandoned.

The Teacher Education Program

Many instructors are involved in the preparation of the large number of future teachers who attend Queens College. Approximately 800 staff members taught over 8,700 undergraduates in the fall of 1964. Of the 8,700, over 3,000 will eventually become teachers, and of this number somewhat less than 1,500 will become teachers of a subject in the secondary schools.

The education of these prospective teachers can be divided into three parts--general education, specialized education, and professional education. The general education, approximately one-half of their courses, consists of study of the natural sciences and math, the social sciences, and the humanities, with a heavy emphasis on the humanities at Queens College. For those preparing to be teachers in junior and senior high schools, a choice of specialization must be made among art, English, foreign language, home economics, math, science, social studies, and speech. About one-third of their undergraduate studies will be in this chosen subject. Their professional preparation consists of studies in the social and philosophical foundations of education, educational psychology, and classroom methodology. These courses are all accompanied by observation and practice in field situations related to the content of the courses. The professional courses account for about one-sixth of the students' total programs.

The ultimate purpose of the BRIDGE Project was to make such modifications in the professional preparation of secondary school teachers as would better prepare them for teaching in the depressed-area junior and senior high schools of New York City. This focus reduced the number of instructors potentially involved to those primarily concerned with these professional courses, a group of perhaps 20 to 30 people. To bring about modifications in the classroom instruction of these professionals is a complex endeavor. College teachers are highly educated and widely experienced. They are jealous, and properly so, of their right to make independent judgments. The only approach which recognizes their independence and professional competency is to make it possible for them to identify and explore new problems and to test their own hypotheses about appropriate courses of action.

Acting in consonance with this reasonong, the BRIDGE Committee sought to involve as many of these people in the Project activities as their time and the resources of the Project would allow; to keep them informed; to provide them with materials, test data, and accounts of the experience of those participating in the Project which would be useful in their classrooms. Consequently several Department members acted as consultants to the participants in both the classroom activities and the research aspects of the Project, as participants in workshops and conferences, as discussants with the students participating in the After-School Centers, and as users of the materials produced by the Project. In addition, those who taught in the secondary education program heard and discussed annual reports on the Project from the Project Committee.

A detailed account of the BRIDGE Project follows. Chapters 2 through 9 present experiences and findings of the in-school aspect. Chapters 2 through 7 are based on an analysis of the activities of the coordinator and the three teachers. Chapters 8 and 9 present the findings of the testing program that was conducted during the three years of operation of the small-school-within-a-school. Chapter 10 describes the After-School Centers, reports the opinions of the Center supervisors, and presents the conclusions of the research team which compared the impact of the experience of the students who

participated in the After-School Centers with the youth agency work on the other students. Chapter 11 describes the participation of College people in the Project. Conclusions and recommendations are found in Chapter 12. A proposal for future study is made in Chapter 13. The appendix contains the extended data of the research and describes some special activities of the Project in detail.

Part II

THE SCHOOL PROJECT

Chapter 2

General Organization

In the original plan for the BRIDGE Project, the junior high school part of the study was called The Demonstration Project. Perhaps "demonstration" was not a well chosen term. Although it was hoped that certain features of the study would demonstrate their superiority--e.g., the superiority of the organizational design over the usual junior high school organization--the Committee realized that the kind of refinement of classroom teaching, including innovation in curriculum and method, which is usually associated with a demonstration school could not be attained by these relatively inexperienced teachers.

Two of the major objectives of the Project were the assessment of beginning teachers' problems in special service schools and the achievement of better understanding of the learning difficulties of children in such schools. The setting was conceived as a laboratory where it might be possible to examine honestly the daily frustrations of teachers and pupils. The examination was to be done both by the teachers in the Project and by the coordinator along with the College staff. Recording of progress and problems was to be informal. At the end of the study, the Committee hoped that a more realistic understanding of the actual teaching task in this school could be obtained. The Committee also believed that if the environment provided the teacher with a certain amount of freedom and with continuous help and the pupils with understanding and with continuity of relationships, the children would make more progress than comparable youngsters in the traditional setting.

Setting

The junior high school chosen for the study was a "Special Service" school of about 1,100 students located in a depressed area of South Jamaica. For the three Project classes, the school administration provided a cluster of three rooms on one floor and a fourth classroom which housed the coordinating teacher and the psychologist. This room provided space for curriculum materials and equipment and served as a meeting place for school staff and college committee. Although not deliberately planned for, this room soon became an emergency aid station for the children. It was a place to run to with an immediate problem, a place to drop by in the morning or after school, a place to work on special projects, a place to borrow lunch money, and much more.

The room arrangement permitted these classes to become a school-within-a-school for about two-thirds of the day. This had many advantages, among which was the opportunity it provided for close association of teachers and pupils.

The school itself was a typical New York City school of forty years ago, five stories high and lacking any aesthetic qualities. According to the school administration, the building design necessitated a fairly regimented plan for the passing in the halls, dismissing, and assembling. Because the school had in the past earned a reputation for being difficult, the administration maintained strong controls and demanded adherence to rigid rules and regulations. For example, pupils were not permitted to play outdoors after lunch, a regulation which all of them resented very much.

Organization

Eighty-five students were selected from the incoming seventh grade according to a table of random numbers in the Fall of 1961. These children were organized into three classes and formed the experimental population for the next three years. The four other seventh grade classes in the school were considered the control group and were taught by the regular school staff. Children who transferred from the school were replaced in the Project classes by newcomers selected at random so that a fairly constant class size was maintained. However, the intensive study of the children was made only of those who remained in the school for the entire three years.

Three teachers were selected to teach the Project children their major academic subjects: one English teacher, one social studies teacher, and one mathematics and science teacher. A coordinator was selected to act as a resource person and helping teacher as well as to participate in the research aspects of the Project.

Originally it had been decided to group the 85 pupils randomly or alphabetically into three classes. After the achievement records were examined, however, the coordinator recommended that the poorest readers be placed in one class. This was done to the extent possible while maintaining balance of class size. The frequency distribution tables (Tables 2. 1 and 2. 2) show the range of reading ability and the overlapping of reading achievement levels in the three classes.

Programs were arranged for the children so that their major studies generally were taught in the morning hours. This plan was advantageous because it provided common free time in the afternoon for the teachers and the coordinator to confer, to plan and to work together. The small school design and the physical organization of the Project provided the necessary setting for what evolved as a team approach to educating this group of disadvantaged children.

Ways of Working

The concept that the teachers and their coordinator were partners in a common enterprise was fostered by continuous consultation among teachers. Many important decisions were reached by group professional judgment. Symbolic of the somewhat unusual relationship which developed among the members of the team was the practice of the Project group of addressing each other by first names, a custom seldom followed in New York City schools.

Another example of this team relationship may be found in the basis for class organization developed in the Project. It was mentioned earlier that during the first year of work, two classes were organized heterogeneously in terms of reading achievement with a minimum grade equivalent score of high third grade. The third class consisted entirely of pupils reading on grade level four or below. During this year, the teachers experienced great difficulty in providing instruction for the heterogeneous classes because the range of individual achievement and needs was so great. Many meetings, both formal and informal, were devoted to examination of ways to cope with the problem and the final group decision was to reorganize the eighth grade classes on the basis of a criterion which, for want of a better name, was called teacher judgment. Accordingly, all four members of the team cooperated to establish the classes for the coming year. The teachers discussed the class placement which they considered most appropriate for each child, not merely in terms of test scores but also in terms of the pupil's total classroom functioning. The class organization which resulted was one class of able pupils, many of whom were capable of achieving at grade level expectancy, one class working on a middle grade level, and a third class capable of coping only with primary material.

Although this organization did not lessen greatly the planning burden of the teachers, since three levels of instruction were still required, it did facilitate the teaching within each group by narrowing the range of abilities to be provided for at any given time. Placement was not considered fixed, for marked changes in pupil functioning were discussed by the teachers throughout the school year and interclass transfers were made where initial judgments had been altered by current conditions.*

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*In the ninth year, the criterion of teacher judgment in class organization was circumscribed by the necessity for placing qualified youngsters on an "academic track." Therefore, all pupils who studied foreign language and algebra during that year had to be assigned to a single class while the remaining pupils were divided between the other two Project classes.

Among other areas of group discussion were those of establishing classroom order, of evaluating pupil achievement, and of constructing tests. Many important decisions more restricted in scope developed from early morning conversations while running the ditto machine, from talks at lunch, from hurried consultations in the hall between classes, and from exchanges over coffee. The mutual affection and respect, the constant cooperation and assistance essential to the team design allowed for close professional relationships quite unusual in a large urban school.

It was precisely this unusual aspect of the coordinator's role--this intimate and informal working relationship with the teachers--which was the cause of some conflict with the regular supervisors in the school. They seemed unable to understand so anomalous a position. Here was a full-time supervisor charged with improving instruction through cooperative work in the classrooms with the teachers and the pupils. She had unusual power to order materials, to adjust the sequence and emphasis of the course of study, to sanction the development of evaluation instruments different from the uniform school examinations, and to do many other things which ran counter to the carefully established routines of the school. At the same time, she had no recognized place in the administrative hierarchy.

In the regular junior high school organization, one assistant to principal usually is assigned to each grade level. He handles most of the administrative and disciplinary matters for all classes on that grade. His work in improving instruction is carried on with a different group of teachers, for he is also the head of one or more subject area departments. Because of the tremendous demands upon him, he is frequently hard pressed to find time to conduct departmental meetings, select materials, observe in the classrooms, and make formal evaluations of these teachers. Since the unprecedented functions of the coordinator were not accepted fully by the assistants to principal in the school, much energy had to be devoted to the resolution of differences which were usually minor but which were unfortunately frequent and time-consuming.

Record Keeping and Reporting

A primary purpose of the Project was the acquisition of knowledge which might lead to modifications in the Queens College teacher education program. Therefore it was necessary to establish a rather elaborate system of recording and reporting the varied and unusual experiences of new teachers working with disadvantaged children. Attention was focused on three interrelated areas: experiences of the teachers, behavior of the children, and evaluation of learning activities. The following sources of information were developed:

Teacher Diaries. During the first months of the Project, the teachers maintained running accounts of their experiences either by writing or by recording on tape daily commentaries of events. Some of these reports were lengthy; others were brief. But they all were immediate and honest reactions to the difficulties, frustrations, successes and stresses of working in a difficult school. As time went on, entries in the diaries were made less frequently and were descriptive only of happenings which were especially noteworthy. Taken together, these records provide a history of daily trials, a study of growth in professional adjustment and capability, and a survey of problems of working in a school in a depressed area.

Case Study Reports. The behavior and attitudes of the children were matters of continuing investigation and concern throughout the Project. At the outset, the teachers were almost overwhelmed by the enormity of the difficulties of establishing class control. Much of their eventual capability in working with groups of children evolved at least in part from the close scrutiny of individual pupils in the weekly case study conferences. In preparation for these conferences, in which one child was studied each week, the teachers wrote individual reports of their perceptions of the pupil in terms of physical health and appearance, behavior, classroom functioning and instructional problems. The preparation of these reports required careful observation and analysis, consuming considerable teacher time and effort. The final reports of the teachers show, however, that they felt this time to have been well spent since it contributed greatly to their understanding of the children and to their ability to work successfully with them.[*]

Quarterly Reports. Since the three Project teachers provided instruction to the same group of youngsters for Grades 7, 8, and 9, they had an unusual opportunity to implement the entire junior high school course of study for their respective subjects and to evaluate the effectiveness of learning activities in meeting the needs of disadvantaged children. To keep a record of their evaluations, they entered marginal notes daily in their plan books, highlighting approaches which were successful, marking exercises which miscarried, and noting group and individual differences in response to learning situations. These notes formed the basis for quarterly reports in which the teachers judged the effectiveness of the content, methods, and materials which they had used in their classrooms during the preceding two and a half months.

It can be seen from the foregoing that the record-keeping tasks of these teachers were burdensome. Daily diaries, pupil referrals, curriculum notes, weekly case study reports, quarterly curriculum reports, and occasional special evaluations of materials all were added to the more usual tasks of developing units of work, writing daily lesson plans, preparing special materials, and evaluating pupil learnings.

Although the reporting function was indeed a toilsome one for the teachers, it served an important function as an outlet for their feelings. In their writings, the teachers emphasized their growing conviction of the importance of structure and control in the classrooms and wondered why they had not been made aware of this earlier. They enumerated their daily trials in devising appropriate activities and asked why they hadn't been prepared to expect all this. They described the behavior of severely disturbed children and called for help in coping with it. And in group conferences, the teachers often stated their hope and conviction that the communication of their growing insights to the College Committee would result in more practical and meaningful pre-service training in the future.

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[*] See Appendix E for specimen case study report.

Conclusion. This chapter has sought to describe the setting in which the Project Committee planned to study the characteristics of disadvantaged children and the problems which beginning teachers have in working with them. Three teachers and 85 children under the general supervision of a coordinator were organized as a small-school-within-a-school in an old junior high school building in a depressed area.

Throughout the study the work of the school participants was characterized by group analysis and group decision followed by cooperative action. Such important concerns as organizing classes, designing evaluation instruments, and establishing criteria for grading were subjects of teacher judgment.

A systematic effort was made to record the experiences of the teachers and their ideas concerning the children through teacher diaries, case study reports, and quarterly reports on lesson plans. These records provided the basis for much of the material which is included in the following five chapters.

Chapter 3

The Role of the Coordinator

For most teachers, the first year in the classroom is a trying one. But beginning teachers in difficult schools face problems of personal and professional adjustment which often prove overwhelming. Confronted with pupils of a markedly different cultural background from their own, on a vast range of achievement levels, with restricted experiential resources and with deficiencies in reading ability and in oral expression, the new teacher encounters tremendous difficulty in establishing meaningful communication with the children.

Exceptional children require exceptional teachers. Recognizing that novice teachers greatly need supportive supervision to achieve professional levels of performance, the planners of the Project established new dimensions for the supervisory role:

> The coordinating teacher will be a person with considerable teaching experience. He will be in and out of the classrooms, getting to know the class problems and the students well. He will meet with each new teacher privately and in formal staff conferences, giving the teachers perspective and evaluation--as well as an insider's support and encouragement.
>
> --BRIDGE Project Proposal

The functions of supportive supervision. Since the coordinator came to the Project with several years of field experience in supervising in-service teacher training in special service junior high schools of New York City, she had a general awareness of the most pressing needs of the teachers in such schools. As a resource person, she was able to provide from the beginning the necessary guidance for the teachers in assessing instructional needs and in planning to meet these needs by adapting approaches, methods, materials, and activities to the varied and special abilities and interests of their disadvantaged pupils.

No member of the Project school staff, however, had worked previously in a long and close relationship with culturally deprived children. Consequently, the coordinator and the teachers embarked upon their work as a venture in learning together about the educational problems of their charges and in working cooperatively to meet these problems.

Generally, the teacher derives his greatest sustenance from the pupil response evoked by his professional efforts. But disadvantaged pupils with their grave learning handicaps provide little of this. Therefore, the supervisor had to supply most of the needed encouragement in many ways. Probably the most important of these was working with the teacher to establish realistic goals both for himself and for his pupils. Then she had to give honest but generous praise for every effective effort, for the early achievements are often painfully small ones. She had to help the teachers to develop meaningful criteria for and methods of evaluation so that both instructors and pupils were provided with concrete evidence as reassurance that learning was taking place. The supervisor had to be ready always to provide assistance in trying situations, both disciplinary and instructional. And she had to be able to share the teaching burden, both in planning and in classroom execution.

The teachers and the coordinator began their work together as a team dedicated to the attainment of common goals: the development of the highest possible achievement in the children and the building of the greatest possible professional competence in the teachers. To accomplish this, the coordinator saw her role as one of providing supervision through shared experience.

The Dimensions of the Task

Working with the teachers. The organization of the in-school aspect of the Project provided unique opportunities for on-the-spot, informal conferences among all the members of the team and between individual teachers and the coordinator, whenever the need arose. And the low teacher-supervisor ratio enabled the coordinator to be on call to all the teachers at all times.

The coordinator was in each of the classrooms at frequent intervals throughout the school day, not as an observer but as a participant. She worked as a helping teacher, distributing materials or assisting individual pupils. She joined in group discussions, raising questions to develop certain concepts or acting as devil's advocate to present opposing views for critical examination. She gave demonstration lessons in reading skills during which the regular teacher acted as assistant. She engaged in team teaching activities. Thus she became both to the pupils and to the teachers an accepted part of their classroom experience and her supervisory function was not obtrusive.

The knowledge of both pupils and teachers which the supervisor gained through this direct classroom participation was utilized to improve instruction through individual and group conferences with the teachers. Each teacher was scheduled for an individual weekly conference with the coordinator. The first part of the conference period was devoted to an overview of the teacher's weekly activities. First, the week's lesson plans were evaluated together, with the coordinator reviewing the marginal notes and questions which she had written as she read the plans on the first day of the week. Then the classroom procedures were surveyed to determine which aspects had been successful, which had been unsuccessful, and the factors which had determined success or the lack of success. Throughout this part of the conference, the coordinator, through appropriate questioning, sought to lead the teachers to insightful evaluation of their own work.

The second part of the conference was concerned with projected plans and activities, both immediate and long-range. Here, the supervisor tried to assist the teacher in foreseeing his own future classroom problems and needs in specific instructional context. Resources, materials, and methods were suggested by both participants, to be evaluated by the teacher and incorporated in his plans.

The final part was taken up with consultation on teacher problems. These difficulties were many and varied. Some reflected difficulties in interpersonal relationships among the members of the team; some were caused by inability to establish rapport with individual pupils; others arose from imperfect communication with the school staff and administration. And just under the surface of professional issues ran the strong current of personal dilemmas. Usually, these non-professional predicaments were transitory and self-correcting. Occasionally, however, personal emergencies were overriding and had direct effect on classroom performance. When such occasions arose, the supervisor provided detached encouragement that offered work as a kind of therapy. The coordinator's task might have been much simpler without the intrusion of these personal needs, but it is quite likely that the insights gained made possible a much more effective and meaningful kind of supervision than is generally practicable.

Two group conferences were held each week. The first of these was devoted to discussion of administrative needs, both school and project; to review of curriculum experiences in the various content areas to facilitate integration of learnings by all the teachers; and to consideration of teacher suggestions for dealing with common problems.

The second group conference was concerned with an examination of the ongoing instruction in the developmental reading program. Pupil needs were determined by cooperative examination of classroom performance and of test results. Each week, instruction in reading was focused on a specific skill or one aspect of a skill. Together, the teachers reviewed the resources--in content and in materials--which the coordinator had collected. Then definite lesson plans were developed and suggestions were formulated for practical application of the specific skill in all content areas, thus insuring practice in transfer of the learnings.

The coordinator felt strongly that experimentation was to be encouraged, but it was never her view that beginning teachers be given complete freedom of choice regarding content, method, or classroom management. An initial effort was always made to get the teacher to suggest his own ideas about the handling of a new instructional difficulty, and these ideas were examined in the light of principles. Whey they appeared to be unworkable or when teacher solutions were not readily forthcoming, the coordinator provided several possibilities for dealing with any given aspect of instruction and the teacher made his choice from among them. At no time did the coordinator hesitate to veto procedures which, in her professional opinion, were unsuitable to the educational situation. It is her belief that these approaches set acceptable limits and provided necessary standards for the novice teacher.

For the early days of the Project, the coordinator set as her immediate goal the preparation and execution of good, workmanlike, but simple lessons. She believed that teachers needed time to adjust to their unaccustomed situation and that modest initial efforts, by reducing the possibility of failure, would build teacher confidence. She knew the importance of advance planning and of established routines to the success of group work and of individualization in the classroom. Consequently, she did not encourage the teachers to propose ambitious instructional designs for the first days of the Project. However, teacher enthusiasm and idealism prevailed for one member of the team with disastrous results. As he described it later to an audience, "When I said that now we'd move our chairs into a circle, the children moved, all right. They moved right out into the hall!"

As might have been expected, the teachers in the Project exhibited marked individual differences in personality, in teaching style, and in receptivity to suggestion and assistance. Two of the teachers had broad knowledge in their subject fields but were hard-pressed to organize this knowledge for meaningful classroom presentation. They needed constant assistance in classifying learning activities and in structuring them into meaningful wholes. The third teacher was an accomplished person in the establishment of routines and in the careful planning of daily experiences. But she was reluctant to embark upon units of work and to engage in procedures which departed from the most restricted and traditional. Throughout the Project, the coordinator worked with these teachers to increase professional self-discipline in two of them and to evoke latent creativity in the third.

Most of the learning experiences devised for the Project children were presented in topical or thematic units. The coordinator worked with each of the teachers to select unit themes and to suggest instructional resources. Then individual lessons were planned to contribute to the development of the unit goals. These lessons were evaluated by the coordinator and the teacher as described earlier. Careful planning of learning experiences was considered essential to classroom success. The coordinator never relaxed her adherence to this idea, and the burden of daily and unit planning became a way of professional life to the Project teachers. Although the planning of lessons was time-consuming, the Project teachers increasingly recognized its importance to teaching proficiency and they developed above average planning skills.

The intensive planning of the coordinator with the teachers centered around certain recurring problems:

1. Selecting meaningful unit topics.
2. Developing specific teaching aims.
3. Choosing activities to accomplish these aims.
4. Providing slow, systematic, and sequential presentation of facts and concepts.
5. Eliciting information from the pupils, rather than giving it to them.
6. Varying activities within a period.
7. Furnishing meaningful repetition of learnings.
8. Helping pupils to see relationships and to transfer knowledges.
9. Adjusting instruction to appropriate levels.
10. Providing for individual and group work.
11. Emphasizing reading skills in study situations.
12. Devising meaningful methods and instruments of evaluation.

High professional goals were encouraged constantly. It was inevitable that they were not always achieved, but there was usually much that was good and praise was given--always honestly, but fully and freely. For as a member of a common enterprise, who could understand better than this supervisor the great struggles and the little triumphs of the daily shared experience?

Learning about the pupils. The coordinator devoted much time to studying the group needs and to guiding the teachers in understanding these needs in order to provide the most effective educational atmosphere. Test scores were examined for range, frequency distribution, and modalities. Classroom observations by teachers and by the coordinator were shared and were used to provide meaningful contexts for the interpretation of test performance. Informal methods of evaluation were devised to provide specific information about pupil functioning. The knowledge gained was used by the teachers as the basis for determining the levels of instruction for each class, for organizing instructional groups within the classes, for selecting topics to be taught, and for adjusting the scope and sequence of their presentation.

However, teacher effectiveness is determined not only by knowledge of group abilities, but also by understanding of individual needs. The personal difficulties of the disadvantaged adolescent frequently are so great that they affect adversely not only that child's ability to learn but also the functioning of the entire class of which he is a member. Because of this, the coordinator found it necessary to give great attention to individual pupil guidance and discipline. Disruptive pupils were withdrawn from their classes and were given work assignments in the Project office. This businesslike approach to discipline allowed time for pupil emotions to calm down. Then, when the youngster sat with the coordinator to check his work, the opportunity for a conference was provided. Frequently, these occasions revealed confidences which gave considerable insight into pupil behavior and which made possible constructive approaches to school adjustment.

Since the coordinator took advantage of every opportunity to provide reading instruction, the task assigned to the disturbing child was usually one which involved reading. For poorer readers, high interest-low difficulty books were provided.* Silent reading of a chapter followed pupil motivation and vocabulary development by the coordinator. Then, after a comprehension check, the pupil read parts of the chapter aloud and was given some help in word attack skills. More able readers were provided with juvenile crossword puzzles or with study skills assignments, all of which were checked and discussed. The most disturbed children were provided with work in arts and crafts or were asked to help with routine tasks in the office.

The subsequent conferences were designed to help the children to discover why their behavior was unacceptable and to devise means of avoiding future transgressions.

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*For a representative list of these materials, see Learning to Teach in Difficult Schools, BRIDGE Project Publication #4.

The coordinator's opening question usually encouraged the child to give his own version of his actions. Then his version was compared with the teacher's report to lead the youngster to see differences in interpretation of what had occurred. Discussion developed the understanding that behavior which might be acceptable in out-of-school relationships was totally inappropriate in the classroom. (This task was rendered easier because of the attitude of mutual respect and mannerly address maintained by the Project teachers.) Recalcitrants were censured more in regret than in displeasure. "Such actions cannot be excused in a person your age. How can be possibly recommend you for high school?" Usually, it was possible to establish some basis for agreement in judging the pupil's behavior and to set up some limited and achievable goal for improving it. The child went forth with a specific aim for moderating his actions and with the invitation to come back for help whenever he felt it was needed.

A confidential anecdotal file was established for each pupil. In this were kept teacher comments, records of coordinator interviews, referrals by other members of the school staff, and notes on parent interviews. Occasionally, a parent was invited to come in and to discuss means of working cooperatively with the teachers to help his child. Some parents were eager to assist; some were defensive; others were punitive toward their children; a few ignored the invitations completely. Generally, the meetings with the parents revealed a great deal about the background and origins of the children's difficulties. Where the home problems appeared to be especially severe, the coordinator established a liaison with school guidance personnel for referral or with a specific social worker if the child was already known to an agency.

Conducting the case study conferences. As noted earlier, in order to gain the greatest possible knowledge about individual pupils, the College Committee devised the weekly case study conference. This was attended by the three teachers and the coordinator, by the Project psychologist, by the school guidance counselor, and by the College Committee. One pupil was discussed each week. In preparation for the conference several reports were prepared. Each of the teachers wrote an independent evaluation of the child in terms of his physical characteristics, his classroom functioning, his school achievement, his special needs and interests, and the particular educational problems he presented. The psychologist summarized the results of the individual tests he had administered to the child. The coordinator abstracted from the cumulative record information about the pupil's place of birth, his residence, his family, his previous school experience, and his earlier standardized test scores. Copies of this material were distributed in advance to all conference participants.

In conducting the case study meeting, the coordinator focused on four major aspects: first, questions about the general functioning of the child, noting agreement or discrepancies in teacher perceptions of the pupil; second, an interpretation of behavior based on the psychologist's findings and the guidance counselor's information; third, a delineation of the special educational problems of the child; and finally, specific and practical suggestions for working with him in the classroom.

The case studies proved of immeasurable value. The examination and interpretation of pupil behavior enabled the teachers and coordinator to react with understanding and insight. The evaluation of individual needs, interests, and abilities facilitated constructive and effective instruction. One teacher wrote:

> The case study really proved to be invaluable over the three years. It enabled each of us to gain genuine insight into each of the children. Professionally it broadened our scope, and provided us with a more thorough knowledge of the functioning of adolescents, and an increased awareness of the learning problems of culturally disadvantaged youngsters. Apart from the three-year span, and the greater time we had to get to know the youngsters, the weekly conference provided us with a forum at which we could share our own experiences, and gain understanding as to the best way to reach each child.
>
> The case study conference itself was only one step in a whole process that took place. For two or three weeks before writing the case report, I looked at the child more carefully. I began to analyze in my own mind his strengths, weaknesses, interests, social orientation with the class, etc. After the conference, began the time of implementing the recommendations...

> Teaching as we were in an emotion-packed situation, I found that my own reactions to the youngsters were often colored by the happenings of the day. Although this tended to less objectivity, I feel that all in all the observations made by the three teachers have been remarkably correct.*

Developing instructional resources. Increased understanding of the pupils highlighted the urgency of providing for them more meaningful educational experiences. Throughout the three years of the School Project the supervisor worked with the teachers and the College Committee to seek appropriate instructional materials, to experiment with varied methodology, and to modify the curriculum.

Cooperating with resource persons. Short term assistance was provided to the coordinator and to the teachers by members of the College staff who visited the school one morning a week, usually for one semester each. These were specialists in mathematics, in art, and in English. They conferred with the coordinator; they visited the classrooms to observe pupil functioning; and they assisted in locating appropriate materials and in suggesting additional activities.

The direct experience gained by these instructors enabled them to adjust their pre-service courses in methods to prepare their students more effectively for working in difficult schools.

Encouraging student teachers. A function of the coordinator not anticipated at the beginning of the Project was that of working with student teachers. Usually, these student teachers are assigned to work with the most capable and experienced cooperating teachers in the schools. However, as the teachers felt more confident in their duties and also because of the close supervision of the coordinator and the assistance of resource persons from the College, it was decided to assign student teachers to work with the BRIDGE classes even though the teachers were relatively inexperienced.

Accordingly, student teachers worked with the Project during the second and and third years of the study. One student teacher was assigned to each of the BRIDGE teachers for an entire semester's experience. Several others came to the Project for shorter periods of time to provide balance with their teaching experiences in more favored schools. At the conclusion of their work on the Project, the students were encouraged to evaluate their experience anonymously. Excerpts from these reports will be found in Appendix G.

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*Excerpts from a teacher's final report, June, 1964.

Student teachers were welcomed to the Project as full members of the teaching team. The coordinator provided orientation to the philosophy and organization of the Project and then she encouraged the students to assume immediately the role of helping teachers in the classroom. They stood hall duty, took attendance, conducted opening exercises, and took part in all the varied activities of a full-fledged teacher.

The student teachers gained knowledge of their pupils through observing them and working with them in the classrooms, through discussing them with the cooperating teachers, through examining their anecdotal records with the coordinator, and through participating in group conferences. They gained professional knowledge through utilizing Project curriculum resources, by working in partnership with their cooperating teachers, by consulting with the coordinator, and by conferring with the College resource persons.

As cooperating teachers, the members of the Project staff became teacher trainers and passed on to others the professional assistance, the encouragement, and the support which had proven so essential to their own difficult task. A measure of the success of this experience may be seen in the fact that, of the three full-time student teachers assigned to the Project, all accepted regular positions in the school after graduation. The part-time student teachers stated unanimously that, after their positive experiences with BRIDGE, they would not hesitate to accept assignment to this difficult school.

Dynamic Changes in Supervisory Activities

The broad definition of the coordinator's role and the small number of classes in the Project allowed her to adapt her activities to the changing needs of the school situation. During the first year fully half her time was, of necessity, devoted to pupil discipline and guidance and to the establishment of order and control in the classrooms. Since this limited her hours for the improvement of instruction, careful planning for most effective use of this time was necessitated. The various aspects of this work have been described earlier in this chapter. In addition to the consultation and cooperative effort possible during the school day it was found desirable to meet with the teachers outside of school during vacations for day-long conferences devoted to long-range planning and for examination of instructional materials and resources. Also, two or three such meetings were held with the College Committee each year for the discussion of Project progress and problems.

An unforeseen difficulty was encountered during the first two years of the Project in its relationship with the school administration. The unorthodox concept of supervision and the mental hygiene approach to discipline embodied in the Project design were a threat to the strict controls and taut structure which the administration had been able to establish only after long and arduous effort. This philosophical difference became the hub of an uneasy relationship in which communication became exceedingly difficult because of lack of agreement on basic concepts.

During the second year, an effort was made to transfer much of the work in guidance and in constructive discipline to the grade guidance counselor. Because the counselor was a person of perception and competence, this worked reasonably well. However, the location of the guidance office on another floor in a different wing of the building made contact between the counselor and the coordinator and teachers very difficult. Also, the school administration wished to keep separate and distinct the functions of the guidance counselor and the dean of discipline. Despite this, the working arrangement freed the coordinator to devote more energy to working with the teachers in the classrooms and to cooperating with them in developing more creative approaches and materials of instruction.

The third year saw the further development of professional capability and independence in the teachers. The arrival of a new administration made possible a full and effective partnership with the guidance counselor in the areas of pupil guidance and discipline. Unfortunately, a new dimension was added in the persons of more than twenty new pupils who were admitted to Project classes on transfer from other schools. A considerable proportion of these children had severe problems, and the coordinator's guidance function perforce was expanded again.

The Meaning of Room 311

While the Project office was established for the use of the team members and the College Committee, it soon became much more than an office. It grew to be an oasis for the teachers and a second home for the children.

In this room the teachers worked and conferred. It was a place of refuge when the pressures of the classroom or the school as a whole became insupportable. It was here that the College Committee came to join the case study and curriculum meetings and to discuss the difficulties of teaching in a special service school.

But to this room, too, came the children. Sometimes, they came because of inappropriate behavior in the classroom. More often, however, they came to satisfy some personal need. A hem had come down or trousers had split; a finger was cut, and did we have a band-aid? Lunch money was loaned; little valuables were held for safekeeping. Reassurance and affection were dispensed together with pieces of candy from the container on the coordinator's desk.

As the Christmas season approached, the office was decorated with wreaths and designs prepared by the children. A small tree was trimmed with ornaments devised by the pupils. On the day before the holiday, all the BRIDGE classes assembled there to sing carols and to receive candy and little gifts from the Project teachers.

Throughout the school year, paint pots and brushes could be found in the office closets. A model engine in its various stages of construction occupied one end of a table for several weeks. Large containers of paste and bales of newspaper were distributed throughout the room when African masks were being produced. And the pleasant smell of scorched wood traveled down the corridor when the boys were burning designs on their African drums.

Parents came, too, to talk about their children. And in doing so, they often revealed personal problems of magnitude and manifested the courage to survive despite these problems....Social workers came to share their knowledge of the difficulties of the children and to pool suggestions for helping them....Once, the police came to investigate a new boy who was almost beyond help....And for three years, the office was almost literally the physical heart of the Project.

Conclusion

The role of the coordinator evolved from meeting the professional needs of the Project teachers and from studying the educational needs of the Project pupils. For the teachers she became a resource person in helping adapt the curriculum to pupil needs, in suggesting methods, in securing materials and in establishing discipline. Because the Project design emphasized cooperative relationships, the coordinator was able to empathize with and to support the teachers in their exacting tasks while acting as a guide in the development of their professional skills. To the pupils the coordinator served as informal guidance counselor, arbiter of constructive discipline, and parent surrogate. As needs changed within the small-school structure, the coordinator's functions changed also. Since the general description of the coordinator's role in the Project proposal provided the flexibility necessary to adapt to the dynamics of the small-school situation, such modifications were possible.

A final comment should be made about the relationship of the organizational framework to the functions of the supervisor. The supervisor in this Project worked as a general curriculum consultant rather than as a subject matter specialist. The focus of her efforts was on meeting the needs of a limited group of pupils over a three-year period by developing the professional competence of three teachers. The small-school-within-a-school provided an excellent framework for the effective exercise of her functions. It made it possible for her to develop a team relationship which gave added meaning and support to their individual efforts. This group feeling seemed especially helpful to inexperienced teachers and supported the assumption of the Project Committee that the supervisor in a difficult school should have general curriculum responsibilities rather than being assigned to a single subject.

Chapter 4

Discovering Meaningful Content

Pre-Planning

Although the Project plans called for covering the general scope of the New York City course of study in the four subject areas, the Junior High School Division had agreed that it would not be necessary to follow the prescribed sequence. It was also agreed that there would be freedom to vary the time spent on the required topics, and that materials different from the approved textbooks could be used as substitutions and supplements.

The College Committee wanted the new teachers to share in the development of units of instruction and to be encouraged to use their initiative in carrying out the activities.

A one-week workshop was held before school began in September 1961. General objectives were discussed and skeletal plans made. In social studies it was agreed that American History would be taught in the approved course of a two-year sequence. Omitted topics such as New York City and State would either be taken up later or integrated with the history. It was also agreed that world relationships with a geographical emphasis would be studied in the third year. The social studies teacher gathered material and prepared a plan for the first unit, on Explorers.

In science, the decision was made to follow at the outset the prescribed sequence, which began with a unit on astronomy. As will be seen, major changes in the science curriculum were made as the year went on.

The Committee felt that whenever possible English and social studies might be at least loosely correlated. No specific works of literature were required in the syllabus, so the English teacher decided to begin with biographies and stories related to explorations--not necessarily limiting her content to American explorations, but with the idea in mind of emphasizing the motives of explorers.

The skill subjects, including mathematics, language usage, spelling, and "corrective" reading, were to be planned in greater detail after more careful diagnosis of students' needs had been made. Although the majority of the children were retarded in reading and arithmetic, there was still a range of below 3.0 to 10.0. Because of this, it was recognized that there would be the need for planning some instruction on an individualized or group basis.

The regular texts issued to the teacher were examined before school opened in the fall. It was evident at once that many of these were inappropriate, chiefly because they were above the reading level of most of the children, but also because the content was meagre and uninteresting (see Appendix A).

Problems of Selection and Planning*

The first problem that the teachers cited in their diaries was their shock at the inability of the children to read the material in the books provided. Although they knew the reading levels of the children as revealed by standard test scores, they did not really believe that so many of them actually would not be able to read fairly simple material. When they met their classes and they realized they could not use regular seventh grade texts, there was much scurrying around, with the help of the coordinator, to get elementary books (there were some dated 1930 in the storeroom), to prepare ditto sheets with simple content, and to purchase inexpensive paperback materials. The teachers continually made the point that "to get curriculum materials ready would be an almost impossible task in the ordinary school where a new teacher has neither the continuous help of a supervisor, nor any school funds to purchase additional material on the spot. It is hard enough here with the help we have." The teachers vigorously criticised their College preparation for not giving them the kind of pre-service help they found they needed.

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*This material is taken chiefly from teachers' comments in their quarterly reports and diaries and in discussions at weekly meetings.

The next thing the teachers mentioned was that not only could the children not read, but that they could not understand the concepts even when they were explained to them. Teachers stated:

> I feel I have prepared too much material for my classes. I over-plan constantly. My expectations are very high and then when I teach only one of the concepts, rather than the three or four I had planned, I am disappointed. I must learn to use simpler vocabulary. I cannot find easy words that will describe what I would like to say and I see the children looking at me puzzled.
>
> One learns to modify goals and set new ones as the year progresses. We learn that the science content we were taught in college is not what we must teach these children. We learn that we really can't teach seventh, eighth, or ninth grade work successfully, but must teach third, fourth, and fifth year work. We learn that a child's verbalizing of factual information does not mean he understands. We learn how to slow down, repeat, summarize, ask good questions and stimulate interest.

The meagreness of the background of the children was appalling. Everyday knowledge that teachers took for granted was not there. The concepts they were trying to teach were based on a background which city curriculum planners must have expected children to have mastered previously. The teachers felt that this paucity of information was also due in large part to the fact that these children had little family discussion, few meaningful excursions with their families, and practically no books or magazines in the homes. Some examples are given below.

In science, the teacher began with the prescribed unit on astronomy. Not only did the children have no interest in the heavenly bodies, but they had not the most elementary notion of anything outside the earth. Her diary notes read:

> The children were trying to understand the difference between rotation and revolution, but they couldn't. Since there was little demonstration material that I could use, the children soon tired of talk. We collected pictures, saw film strips and photographs, and I read stories about the constellations and myths, but it was slow going! Interestingly enough, the youngsters liked the stories about Galileo, Copernicus, and others better than the study of the planets. The topic they liked best was "the moon" when we talked about

> a trip to the moon and life on the moon. We discovered a space record of catchy songs which also went over, and upon second listening they found they had gathered some information from the lyrics.

The teacher reported that although she had some success relating the material to the current happenings on space travel, these children did not show the interest in it that most middle class adolescents do, and that their knowledge was gravely limited. This teacher, having taught for two years in a middle-class school, summed up her first month of teaching thus: "Having taught science to other seventh graders I assumed that the children had some basic understanding. Now I assume nothing.... Most of the youngsters have never seen a Bunsen burner, a test tube, a microscope, or a telescope."

The other two teachers' early diaries supported the views of the science teacher. When students tried to put symbols on a map, many could not locate New York. Some did not understand the difference between New York City and State, not having any comprehension of political divisions. Others did not know east from west or the names of the two oceans that bordered the United States. The teachers had to teach these concepts before students could understand a story or an idea. Pupil concepts of time and space were just as pitiful. When asked if it were farther to Boston or to California, many didn't know, nor did they have any idea how long it would take to get to either of these places by train, bus, or plane.

When a film on early explorers was shown, there was absolutely no understanding of Europe at the time--of the location of Spain or of what was going on there. The teacher began to think that trying to teach the idea of why people started to search for a new world was futile. Though little world history is taught in elementary schools, and not much background is expected, many children from better neighborhoods have somehow acquired some knowledge about lands across the sea, and at least know that Spain and Italy are located in Europe.

In having the pupils read biographies, the English teacher found the same lack of knowledge of time and place. In addition she noted the pupils' inability to understand much of the descriptive material. Although quite a few youngsters came from rural areas and had spent their early childhood in the South, they did not know common names of plants and flowers nor did they seem to have any knowledge of farm life. In one of the Teenage Tales, there is a story of a hunt. None of the children knew what a pheasant was, nor did they have any concept of the terms used in hunting.

As time passed, the teachers learned that there were two alternatives: To supply needed background or to give up and move on to something else.

Meanwhile the teachers were encouraged to try to correct the lacks in essential content, and to become attuned to students' interests and curiosities in order to select experiences that would be more meaningful to them. Occasionally the topic was interesting, but the interest would often be superficial and transitory. At other times the interest was in an aspect of the topic different from the one which the teacher had included in her plan. Like all new teachers, these teachers strove to stick to their lesson plans and to get the material covered within the time limit. They had to learn that it is best to teach something when children want to know about it even if plans must be modified. With experience they acquired this ability and were better able to judge when to go "off on tangents" and when to insist on carrying out the plan as made.

In analyzing the teachers' first complaints about curriculum, one could see that they did not always distinguish between inappropriate content and ineffectiveness of teaching. During the first week of school one of the teachers said, "The curriculum is completely unsuited to these children." Such blanket statements were later analyzed and teachers learned to ask themselves questions like the following regarding content.

> Should this topic be required of these students? If so, what should be the objectives--the most essential concepts and facts that these children should acquire? Have they had the background to understand these concepts? If not, how can we give it to them? What interests from their own lives can be built upon and satisfied while studying this topic? What materials are available that they can read? What films and pictures can we use? What materials will we have to write ourselves?

Discussion of questions like these formed the basis for the staff's weekly curriculum meetings. Plans were often revised and curriculum materials purchased or prepared by the teachers themselves.

Appropriate Content

The teachers found that as their relationships with the children grew closer, the children's interest increased. They discovered that in mathematics and in certain aspects of language skill development many of the children were highly motivated and would complete lessons without much grumbling. Mathematics was rated the favorite subject during the first two years, and the teacher found that the children were just as interested in the basic skills as in the so-called "practical math" for consumer use. The teacher believed that the very definiteness of the mathematics assignments, the easy steps, together with a variety of drill activities and changes of pace, were responsible for the positive attitudes. The question of selection of content in skill subjects, then, did not seem to be based as much on whether a particular topic appealed as whether it could be understood and whether the goal could be readily achieved.

In the other subjects, however, certain topics had greater appeal than others. Science seemed to be the most interesting subject, but even here certain topics meant little to the children. Sometimes a topic could be made to appeal by the way it was presented, focused, and developed. The teachers felt strongly that the interests and needs of the children, as diagnosed by them in daily observations, should be used to modify the required curriculum. The BRIDGE Committee encouraged the teachers to find clues to the particular interests and curiosities of these particular children so that the learning experiences could be made meaningful. Among things they noted were the following:

Content highlighting personal relationships. The reader will remember the reference to the interest children showed in the astronomers. In other units the children were fascinated with Typhoid Mary, with doctors who saved people's lives, with experiments in medicine and agriculture, and with the effect of the atomic bomb on the people of Hiroshima.

The more personal aspects of social studies also attracted attention. Children liked to talk about how the Indians and white men felt about each other; which men were considered heroes and why; why people wanted to leave home; whether people were afraid. It made little difference whether the people were living or dead. Current events picked up when the teacher decided to use a "Men in the News" approach. The most appealing part of the Junior Scholastic was always the article on "Young People in Other Lands," whereas it was slow going to try to arouse concern for any of the major political or economic occurrences unless they contained human interest incidents.

The teachers speculated about this intense interest in the personal aspects of any subject. They believed it was due in part to the lack of the students' involvement with the more remote and complex activities and events. Most of the children's lives are lived in close "one to one" or "one to a few" relationships. From what the teachers could learn from children's discussions, there was little talk in the home about political movements or events, community needs, or international affairs. Nor did these children have hobbies. In the responses to a questionnaire given the children, teachers found that watching TV was the pupils' greatest leisure-time activity, and that they seldom built things, worked on models, collected things, or engaged in any other hobbies that might carry over to school content. Most of their leisure time was taken up with watching soap operas, reading scandal sheets, gossiping, hanging around, and trying to solve their own adolescent problems by talking to peers. Their desire to continue in school this search for solutions to their personal problems was capitalized on by selecting relevant content whenever possible. As time went on, the teachers tried to move the children beyond these primitive, but very potent and necessary, desires to the study of more complex relationships in social life and to non-personal relationships in science, but they continued to use the children's interests as starting points.

Content about the human body. Another major interest (still part of personal relationships) was concern and curiosity about the human body. The reader may well ask "Aren't all adolescents concerned with this basic need?" This is, of course, true, but uneducated and impoverished families often lack even the most elementary medical knowledge. Our teachers found that the children had bits and pieces of information--much of it distorted, some false--and some remnants of superstition. They showed an intense desire to get information about all bodily functions, about accidents, disease, pregnancy, alcoholism, dope addiction, and mental illness. They had never had any systematic study of these topics. At the end of the three-year period, when asked on a questionnaire to list the topics they liked best in science, the greatest number of pupils listed the human body. Some of the teacher's comments follow, telling how she organized the work in biology:

> This year has been devoted mainly to one aspect of science--biology. The major goal is to see ourselves as vibrant, healthy organisms performing functions necessary to living in our environment. We have included everything from amoeba to humans with emphasis on physiology. We have shared common feelings when we studied the heart (how pulse quickens with excitement and how the kidneys produce excessive urine when one is nervous or upset). We talked about adolescent moodiness, depression, and how all people shared these moods and how to overcome them. We learned about professions in the field of science--the different kinds of nurses and technicians. We found out how babies are conceived and born and were able to discuss these subjects without being silly or self-conscious. The questions were myriad regarding pregnancy and venereal disease. The children need and want to learn these things. Parents do not give them the information. Yes, I modified the curriculum. This seemed more important than "how nylon is made" so I spent more time in physiology than is usually done in junior high school.

Content about race. The teachers were concerned about how to treat the race problem. Children were reticent at the beginning and seldom mentioned it. As they became better acquainted with the teacher, they sometimes asked direct questions and soon the science teacher found opportunity to discuss skin color, blood types, and hair texture. Response was excellent and myths, superstitions, and misinformation were corrected.

> Today I decided to begin my unit on the Circulatory System with Class 8-3. I began by asking if anyone knew anything about the blood and how it flows through the body. Harold, a transfer from 8-1, said he knew that blood flowed to all parts of the body. Another boy said that the heart pumps blood, and another said that it goes through blue tubes. Before I had a chance to develop the concept of circulation, Harold asked, "Miss M., what kind of guy is real white, whiter than you? He don't have any blood, right?" I thought he meant an albino. I explained that this type

of person was an albino but that he had the same kind of blood that we all have. What he lacks is the chemical that makes skin light or dark, a pigment.

By this time the entire class was listening intently to what I was saying. I continued. "Didn't you ever wonder why you are dark and I am light? Why one Negro is much darker than the next? Or why Indians were called Redskins, or some Italians have darker skins than Irish people?" No one said anything....The silence was deadening. I explained that a chemical called pigment determines how light or dark we will be, and that it is passed from one generation to the next along with eye color, hair color, and facial contour. I told how this chemical clumps together or scatters, determining whether we are dark or light. Victoria shook the silence with "That ain't true. My mother told us that the reason we is black is that Adam and Eve had two sons, Cain and Abel-- Cain was black and Abel white. Because Cain kill Abel, all black folks like us are bad, and the darker we are, the badder we are." The other kids listened and a few agreed. Several withdrew into their books and Samuel said, "Let's get on with the lesson." Arthur and William said it wasn't true-- "If that's so, how come so many Negroes do good in the world? They play music and work at the U. N." Another boy said, "Some don't do good, they drink wine all the time. That's how a lot of us will wind up." Henrietta said, "What about Teen Band Stand and that ugly old white man Dick Clarke? He always turn the cameras off the colored kids when they dance. How about that?" Edward, who just moved up North, said it wasn't true. He said, "White and blacks can't be equal and that's the way it is. My daddy say you gotta live with it that way." William said rather emotionally, "We don't get the same jobs," and Annie said, "Because we are dumber than most whites." All this time I was not in the conversation. Juanita said,"That's why Mrs. M. say we should learn a lot so we can get chances our folks didn't have." The boys wanted the girls to keep quiet.

The topic was no longer scientific, but on a highly emotional level and the children forgot where they were for the moment until the bell rang and class was over. A year ago I probably would have felt a bit wobbly, but this time I felt confident that what we are doing is the best thing that can happen to these children. Surely they are over-reacting, surely they are anxious, but they know that we care about them and want what is best for them. Since that time I have noticed a delightful freedom in the classroom that was not there before. During math, when we are in small groups, we work and talk. There is a closeness between us that was not there before. I appreciate opportunities like that to share intimate feelings with youngsters whom I begin to respect more each day. As exasperating as work with them is, it is rewarding more than I can ever express.

A study of the Negro and his place in American life was also included in social studies classes. Again capitalizing on the pupils' interest in people, the Project members decided to use biographies and stories rather than a straight history of the American Negro. The students particularly liked the stories of Frederick Douglass and Harriet Tubman.* Strangely enough, they knew very little about these leaders of the Underground Railway. They found these two heroes much more interesting than George Washington Carver because, they said, "They worked with people rather than plants."

In literature, too, attention was given to stories about race relations and to poetry and stories written by Negroes. The teachers found it satisfying, too, and a close relationship developed when the children felt they could talk intimately with white persons about their race. On the eighth grade questionnaire, study about the Negro was listed as the favorite topic by a majority of the children in all three classes.

It is interesting to note the difference in response to the study of the American Negro and the study of the African Negro. Since ninth grade social studies is chiefly geography, it was decided to begin with a rather extensive unit on Africa. It seemed not only that a study of the students' social heritage would be of interest, but that a knowledge of the growing importance of the new nations would be necessary to an understanding of our world today. As it turned out, this unit was very successful, but the first reaction of some of the students was one of apathy, self-consciousness, or outright resistance. One of the boys said, "We ain't Africans, so don't think we are. I'm not like them in any way." The teachers attributed this to the fact that the students did not wish to be identified with primitive tribes, their knowledge to date being confined to stereotypes, stories that focused on "savages," etc. (These students have acquired little of the sophisticated attitudes of certain leading American Negroes who are emphasizing their relationship to the African heritage.) Some time before, they had reacted negatively to a Negro college professor who described her trip to Africa. She continually referred to the people as blacks. The students didn't like this--and try as she would, she could not convince them in one lecture that "black" was not a bad word.

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* See Appendix B for a description of the Frederick Douglass project.

As the study of Africa progressed, the pupils developed more interest. They began to understand the significance of tribal rites and tribal living, as well as to learn about the tremendous progress that is being made, the problems and difficulties of all new nations, and the emergence of native leadership. However, the fact that this unit provided much opportunity for project work, dramatization and music may have added to its ultimate appeal. Africa was listed as the favorite social studies topic in the ninth grade, but some self-consciousness still existed. This was shown by one of the brightest of boys when the classes visited the World's Fair in June. Said Allen, "Guess we ought to go see that African exhibit. We made such a 'to do' about it at school."

Race relations were treated frankly again and again. While learning about Brazil, the students were interested in when and how slavery was abolished there, compared to the United States. They particularly liked studying about the West Indian Negro and his progress.

The reader may be curious about the classes' interest and involvement in the current racial situation. During the three years 1961-1964, the desegregation of schools in the South was a major topic in the news. Surprisingly, the children did not seem terribly concerned at first. They did not identify particularly with the Southern situation. South Jamaica--the area of the school--is not a politically influential section as is Harlem; there are neither as many active leaders nor as much aggressive action. The children did not hear much discussion on race problems at home. Few knew about the James Meredith case at the University of Mississippi before discussing it in current events. The first spontaneous reaction developed when the dogs were used by the police in Birmingham. The early reluctance to talk may have been partly due to the fact that the children were unaccustomed to exploring their deep feelings and to discussing racial problems with teachers, but this changed as close relationship developed. Eventually all aspects of the situation were discussed, including the Black Muslims, the New York City boycott, etc. (The Harlem riots did not occur until after the Project was over.)

Other content of interest: (a) Mystery, Fantasy, Adventure. In addition to the concern about everyday things like health and human relationships, the students had the universal adolescent interest in mystery, adventure, and odd and unusual events. Their fascination with legends, lore, fairy tales, and fantasy was stronger than with most teen-agers. These children seem to have many of the interests and responses of fourth and fifth graders. This is very understandable when you realize that they had probably missed these as young children. Their interest may also be due to an unconscious desire to get away from drab lives "as did Cinderella."

The children did not seem to mind reading children's books as long as the format was not too childish. Those on the lowest reading level liked the stories in the Arrow Book of Famous Stories, a good selection of folklore and legends from all over the world.

A favorite unit was the one on American legends. They particularly liked John Henry and Casey Jones. They responded well also to the unit on Great Decisions with the basic reading being the short stories in Moments of Decision and a Scholastic paperback. The teacher usually selected a group of stories related to a major theme or idea and discussed such concepts as the role of the king in ancient society compared to the role of political leaders today, the difference between the lives of nobility and lives of peasants, and the meaning of poverty today. An attempt was always made to enlarge their knowledge of place and time by locating the story. The interest in folklore diminished only when the story demanded an understanding of history and customs that were too remote or esoteric for the children to comprehend. This was illustrated by the reactions to an Irish story. The teacher commented, "The story depended on a knowledge of specific beliefs and customs they could not understand. The only delightful part of the story to them was the part in which the dying man keeps taking a swig from the jug."

Often the English classes read stories that fit in with their social studies unit. They especially liked stories of the Westward movement (Buffalo Bill was new to some of them) and immigrants. Sometimes it was not the content so much as the style of the story that appealed. They had to be able to understand it; it had to have a point--but one that was not too complex. Like other children of their age, they much preferred action to description.

(b) Curiosity, Wonder, Discovery. While the desire to talk about themselves and other people continued as a major interest in the ninth grade, the children's interest in how "things" grew developed. Instead of just looking at something with a superficial awe, they began to try to investigate it further. They enjoyed chemistry not only when it dealt with practical applications, but also when it was devoted to basic reactions. There was curiosity about the difference between organic and inorganic matter, the processes of changing liquids to solids, and other chemical reactions.

The science teacher believed that much more attention should be given to individual experimentation and laboratory work. These children did not seem to have had the experience other children have had with chemistry sets and mechanical toys and games, with fixing things, or with tinkering with automobiles. Under careful guidance and continuous questioning, the teachers saw the majority of students improve their ability to think inductively, to test hypotheses, and to make generalizations.

Summary

Three years of experience with these underprivileged children convinced the staff that the regular prescribed course of study was not suitable. Particularly in social studies and science there are too many topics, none of which are fully developed enough for the children to comprehend. Consequently the teachers modified the curriculum, selecting the topics that were most meaningful and supplying the necessary background. They found that the pupils responded well to any topics that dealt with personal relationships. They were curious about their bodies and about problems of race. Like all adolescents, they liked stories of adventure and mystery, but because of their emotional immaturity they also enjoyed fairy tales and fantasy. The teachers learned to become diagnosticians and to take cues daily from the children's responses.

Though the teachers did not attempt to devise formal curriculum, they were convinced that throughout the Project they had been moving toward more meaningful content.

Chapter 5

Developing Appropriate Methods

Introduction

Varied methods of instruction were used by the teachers. Controlled experiments to try to prove one method better than another were not conducted. It did not seem advisable to include this type of research within the Project design. The Project was neither adequately staffed to provide the observers necessary to evaluate discrete methods of instruction objectively, nor were our young teachers ready for curriculum research of this rigor. Rather, the policy adopted provided opportunities for the teachers to try many techniques and for the coordinator to appraise their skills and help them improve instruction. It was still hoped, however, that the subjective evaluation of teachers, coordinator, and College staff would give some clues to teaching techniques which might be more suitable than others for these particular children; and also provide leads for more formal research at a later time.

The Committee believed that selection of specific methods depends not only upon one's philosophy of education, but also upon the subject being taught and the specific objectives one is trying to achieve. It is difficult for any young teachers to achieve this flexible approach. They feel more secure if they have a "cookbook" to follow, but in our teacher training program we had not given our teachers a cookbook.

The Project teachers learned the hard way, and for the purposes of the Project this was valuable. They had many difficulties, even with the help of a coordinator. Since they were given no formal patterns to follow, they had to prepare units themselves. At first they expected too much of the children and themselves. Their units were too elaborate and demanded skills that the children didn't have. The pupils not only lacked background knowledge and the ability to read, but also could not carry on the ordinary activities expected of seventh graders. They seemed unable to do anything on their own or in small groups. They did not take care of materials. They could not make simple plans. Some were unable to use scissors, paste, or paint in preparing projects. They teased each other and fought constantly. They did not listen to the teacher or to each other.

This chapter will describe the successes and failures of teachers and coordinator as they worked together in developing simple lessons with clear-cut goals, in trying out techniques and providing for a variety of activities to achieve their goals and gradually to experiment with longer units that demanded more sustained interest and considerable self-direction on the part of the pupil.

The Importance of a Well Organized Classroom and Carefully Planned Activities

The teachers felt in the beginning that all of their problems were discipline problems,* and to a certain extent this was true. The children often got out of hand before activities could get under way. However, the teachers soon recognized the critical relationship between methodology and discipline. The better organized the lessons, the more cogent and more explicit the directions, and the more purposeful the arrangement of equipment and supplies, the better the children behaved. When the children knew what they were to do and how they were to do it, their behavior improved.

The problems of the teachers relative to classroom routines were frequently mentioned in their early diaries.

One teacher expressed his feelings as follows:

> Routines are very important in disciplining a class and I have become increasingly aware of their importance. As I grow in my ability to stick to routines, I notice less unrest in the class, smoother lessons, and better behaved children. However, I have a lot to learn. Among the routines of extreme importance are: passing books and papers, arranging and moving seats, walking about to get materials, taking attendance, keeping records, lining up the class, making sure each child has a notebook, pen and paper, and ever so many more. All of these routines should be drilled into a prospective teacher so that they are almost habit by the time he teaches. It gives him organization and helps set the tone of his classroom.

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* The problem of discipline in a broader sense will be discussed in Chapter 6.

A little later in the first year, another teacher tells how she coped with the problem:

> In such things as passing out books and papers, I find that there are various methods that are good. For example, I keep their folders stacked according to rows. This is done very easily by having the last child in each row pick up his folder and walk down the aisle placing each consecutive folder on top. They are passed out in the same fashion so that it takes one minute flat to get the folders out to the children, and one minute more to pick up the folders at the end of the period. The same method is used with paper.

Over and over again the teachers commented about the need for organization and structure. Though the children responded well to an orderly classroom, it took a long time for them to adjust to changes in routines without becoming upset. One child had a regular tantrum every time his seat was moved. Therefore, the teachers--not wanting such a rigid situation that would rule out changes that were necessary in order to pursue a new activity--had to learn to explain to the children why changes were to be made and exactly how to rearrange seats, pursue a new activity, and use new materials.

The challenge became one of planning ahead carefully so that all arrangements were made before an activity began. Eventually children learned to do certain chores automatically and to take responsibilities for classroom organization.

Organizing the learning experiences in an orderly fashion that makes sense to the children and directs them toward an achievable goal is also important. The teachers discovered that whether the activity is one of discussion, reporting, investigating, drilling, building, or evaluating, the activity must be clearly defined and well planned. This does not deny the teacher's right to departure from the plan if the students' interest or needs demand it, but the departure must be conscious, and the original plan modified, delayed, or discarded deliberately.

As stated previously, many of the teachers' plans were too ambitious in the beginning. One teacher reported:

> I began to realize that I had set goals that were not attainable at this particular time. I expected too much of the children. I expected even more of myself and I found that I wasn't getting

> anything. I wasn't achieving much, though I was expending a great deal of energy. When I rewrote some of the lessons and I started to plan again, I began to realize that if I get one fact across during a lesson and the children understand one concept thoroughly, then I have succeeded in teaching them something.
>
> I've learned to use material that will focus the attention of the students on a specific point and to avoid letting them wander all over the place. I think the students want and need very specific directions. In the Unit of the Revolutionary War I hope to keep the horizon wide but the road to it very narrow so the students won't veer off the course. In order to do this kind of work with the slowest group, it is best to begin with a structured, easy unit of work. Gaining confidence is important both for teachers and students. Work gradually with a few concepts and then introduce something new. Keeping new learnings down to a minimum is extremely important. Too many new things at one time lead to confusion with these children.

The setup for the Squanto unit project* in reading, where children were given short daily assignments with provision for the more able to move at their own rate, helped the teacher see the importance of structure.

> There also have been first signs of success with the 7-3 class and I will have to admit that this success comes as a result of the Squanto material. Because of the kids' earnest desire to get involved with the material, they were more willing to quiet down and to listen. Previously, because of my lack of experience in selecting appropriate material and in giving clear directions, they were not eager to get started each day. Now, because they genuinely enjoy Squanto and because the lessons are more structured, they begin work at once. They give out the papers and books when it is necessary and they collect them. They know where they are going and they have developed a sense of responsibility.

The Saturation Approach

Another ingredient, in addition to structure, found to be essential to any method that was used was what the teachers called the "Saturation Technique." They quickly discovered that "once over lightly" teaching did not work with disadvantaged children. These pupils needed more repetition, more explanation, more connecting links than other children needed. Since simple repetition of the same exercise would become boring and attention would lag, it was necessary to plan to present material in a variety of ways. Several approaches were sometimes used to develop one central concept or skill. Following are examples of attempts to make the subject-matter stick:

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*The Squanto Project is described in detail in Appendix B.

> In my teaching I have subscribed to the theory that our pupils need something repeated in as many meaningful ways as possible. One case in point is the way we treated the teaching of the death of Franklin Delano Roosevelt. In addition to the reading done in the text, the New York Times was used. We looked through the pictures that had been printed in Life magazine at the time. We read accounts in the book When F.D.R. Died by Bernard Asbell. We listened to an Arthur Godfrey recording of the funeral. Pupils read biographies of his life. Class discussions were held comparing the death of Roosevelt with the death of Abraham Lincoln. Comparisons were made of the situation in which each occurred. In the brightest class a discussion was held debating the big "if" in history. How might history have been changed if neither of these men had died when they did?

Another example illustrates the way the teacher tried to repeat main ideas in different contexts and also used visual aids to make meanings clear.

> The third part of the Unit on industry was perhaps the most successful. We spent a great deal of time on steel, using many kinds of materials. Initially we used The World of Steel published by United States Steel. This is an extremely useful booklet, describing the uses and production of steel. We used the filmstrip "The Making of Steel." This enabled the pupils to visualize things that they had only heard about. I had samples of steel and its raw materials which were shown and used. The pupils were shown pictures and they made their own special bulletin board in the hall. They used the text for some of the factual material. They read a story, "The Open Hearth," to lend some of the human drama of the steel mill to the unit. The pupils made maps to trace the route followed in securing the raw materials for steel. This is merely the pattern that was set for further study in this important area. We tried to vary materials as much as possible and to make them as meaningful as possible and I think that this enhanced learning. The classes responded well to the work.

The teachers agreed that in all classes they needed to help the children develop the ability to remember, and that even in literature you could not just run through a story as you might with more able students. Most of the children had not read books of any length and since they were able to read only a few pages each day, the English teacher tried various ways of helping them get full measure from a story, making sure that it was thoroughly understood as well as enjoyed. In teaching Blue Willow, she used the following techniques:

a. children retelling the story so far

b. reading small sections at a time, ending on some crucial moment

c. answering questions rexographed for every day of the reading

d. writing radio plays from the dialogue in the book

e. acting out the scripts

f. taping the performance of scripts

g. listening to the tapes

h. showing photographs of the background of the story

i. writing compositions exploring the social relationships of the leading characters

> Of these activities, the children anxiously look forward to anything related to the scripts: their rehearsal, performance, tapes. At first I tried working without daily rexographed comprehension sheets, but without these exercises the children did not always read the chapters carefully. Too, they seemed to need a sense of daily accomplishment, so I prepared daily work sheets for them. The scripts continued to provide the necessary variation of activity and sparked interest in the material. I feel that the retention of this material resulted from three all-important principles which will guide all my work with extremely slow classes in the future:
>
> a. Provide interesting, varied activities daily on the same material.
>
> b. Repeat the same material over a long period of time in many different ways. Use a long project made of short, satisfying pieces. (Unit lasted almost 8 weeks.)
>
> c. Give daily short writing periods that conclude the lesson in some way (summary statement, answers to questions, radio script, etc.) thereby giving the children the feeling of a day spent in finishing a project that is worthwhile; a sense of accomplishment.

The saturation approach was supplemented by periodic reviews throughout the year. The teachers found that they had to use every opportunity to refer back to the facts and concepts that they had taught. Quotes from the diaries reflected this procedure:

> Remember, we had that word in last week's story.
>
> Come to the map and find Boston. We found it when we studied about the Revolution.
>
> Who can help us remember how we set up the experiment for staining slides?

Learning to Communicate

Anyone familiar with disadvantaged children knows that lack of fluency in oral and written expression is one of their handicaps. It is sometimes said that they are fluent enough on the playground, or in the streets, and that in these situations their speech is not only fluent but very picturesque. To a certain extent the BRIDGE teachers found this to be true of some of the youngsters as they listened to them in informal situations. However, most of the children, in school and out, spoke laconically. In class the answers to teachers' questions were usually "yes" or "no." Their communication with each other often consisted of name calling, teasing, hairpulling, screeches and yowls. Although the girls sometimes carried on short dialogues about their boyfriends or home situations, there was little actual peer conversation. Many had minor speech defects and many more deplorable pronunciation. In some cases one could hardly make out what the children were saying.

The teachers became convinced that there was a correlation between insecurity and lack of coherence in speech, and between lack of involvement and ineffective expression. They encouraged informal talk before and after school. Children then began to tell their joys and sorrows, and to trust the teachers. In class, however, if they asked a question in a formal manner there were still hesitancy and meagre replies. The teachers felt that this was chiefly because the pupils thought of the classroom as a place where exact answers must be given or you were "marked down" for it. Seeking to counteract this, the teachers deliberately provided opportunity for the children to speak without being immediately criticized and encouraged them to express themselves freely. Later they achieved a fine balance of encouragement and correction, helping the child to express himself while at the same time assisting him to improve his way of speaking.

Changing speech patterns and developing the art of conversation is a long, slow process. In addition to the informal approach, there was an effort to provide as many opportunities as possible for oral expression in the regular classroom activities. The English teacher, during the first month, used the interview technique to help children get to know each other.

> In preparation for interviewing each other, I had one student in each class interview me. In class 7-1 there was an excellent interview done by Lawrence who volunteered his services. The class response was excellent also and there was much good humor. Lawrence was very capable of speaking with an adult and seemed very relaxed and at ease. In 7-2 the interview was done by Sheila who didn't know how to speak with an adult at all. She didn't know where to begin or how to conduct herself and was exceedingly nervous, even though she had volunteered to do the interview.
>
> In 7-3 the response was exactly the same with Richard doing the interview. From this I realized that these children can't speak with adults at all. They don't know anything about the art of conversation. One word is all they give in answer to any question in oral communication. Several of the students from 7-1, however, are just the opposite. They are very poised, confident, and verbal.
>
> Pairs of pupils interviewed each other following the set of questions that we developed together. They wanted to know what their favorite TV programs were, what movie stars they liked, what school they had gone to before, how many children were in the family. They lost some of their shyness and enjoyed the activity. After the interview they wrote up their findings.

Dramatization. The English teacher also used much dramatization and role playing. Sometimes the pupils took exact dialogue from a story and acted out a dramatic incident; other times they wrote play material themselves. These activities were intended to develop assurance and poise and here the teacher began to stress correct and effective speaking. Often the children tape-recorded their dramatization and they loved hearing their own voices. The teacher reported:

> Probably the most successful thing I have done with 8-3 is to have them write sections of a story into a play, rehearse it, and then act it out with the tape recorder taking it all down. I was petrified to try it at first. I had half the class complete the writing of the script while the others were seated in a circle in another part of the room rehearsing. (I called the coordinator in to be prepared in case of any uprising.) Everyone worked extremely well. They ask me almost every time they walk into the room, even now, "Can we act out a part of the book today?" Naturally this is one of the activities I will use often.

At another time an entire unit on the theatre was developed. The pupils divided into groups and worked out other plays and presented them to the class. This provided opportunity for group work which took a good deal of planning and also gave opportunity for ingenuity and originality in costuming and props, as well as giving practice in speech.

In a unit on the telephone the children were provided with actual instruments by the telephone company. They practiced making business and social calls. They made dates, applied for jobs, ordered from a store, called the fire and police departments. These conversations were recorded on tape and the children listened and evaluated their conversations. They became aware of their poor speech as well as of the content of their dialogues. They commented "We sound terrible. We really need to work on speech. Can we hear the tapes of the other classes?" That the unit carried over into their daily lives was reflected in their remarks. "I made a long-distance call last night." "I called a store and placed an order. I knew just what to say."

Discussion. By the end of the first year, the students were able to talk fairly well in an informal situation and when they were pretending (acting something out as in a play). They had also begun to improve in answering direct questions, and when encouraged could give a complete-sentence answer instead of one word. This was due in part to the fact that the teachers tried to make sure that they had their lessons prepared and that the questions were not too difficult. When discussion of a broad question or topic was attempted, however, the results were more disappointing.

The teachers were eager to move the children on to abstract thinking, to help them make comparisons and generalizations, and to carry on a discussion of some length. Perhaps the teachers, somewhat encouraged, moved too fast. They found that many students were afraid to compete in the discussion of a topic because they were neither well-prepared nor were they as verbal as others. Those who had more knowledge of the topic all talked at once and seemed to have little control. Many teachers find it difficult to teach discussion techniques to any children of this age group, but it is more difficult with deprived children. They have even less self-control, less practice in the social amenities, and less genuine confidence than middle class children. As a result, the teachers back-tracked a little by structuring the discussions: listing sub-topics, making sure preparation was adequate, working out ground rules. With the lowest group, the teachers tended to do more reading aloud, which the children loved, letting them ask questions as they went along and limiting the discussion to about ten or fifteen minutes.

Discussion improved when the topic could be related to direct experience. The social studies teacher wrote in his diary:

> In teaching history during the last quarter, it was my primary aim, not so much to teach the facts as to create the feelings that were experienced by our fathers and grandfathers.... What happened in my father's teen years? What was the world like then? How did they feel about Hitler, Mussolini, and Stalin? What was it like the day F.D.R. died? Here we had tremendous human resources in experience to fall back upon. The children brought in accounts of conversations they had had with their parents. This was one of the few times that I've heard of conversations that our pupils had had with their parents.
>
> I noticed that the pupils started to compete with each other. After a few days, more and more pupils were responding to the experience questions that were being thrown out. The pupils were told, "Ask your parents and neighbors what hardships they had to endure during the depression." The next day the pupils came in with all kinds of stories about life in depression times. It was meaningless for them to read in the text that the country people were better off than those who lived in the city, but it was only during a class discussion in which parental experiences came out that we were actually able to determine the reasons it was preferable to live on a farm or in the country during the '30's. This has really opened up a whole new area of thought for me. I think that one of the problems that we face in South Jamaica is that there is a non-involvement of the parents in the school work of the children. I remember when I went to school the work that I studied during the day was often the topic of conversation at the dinner table. I think that often when our pupils take home knowledge it is meaningless for

> the parents, but when these parents are able to relate experiences that otherwise might remain unmentioned, this serves a dual purpose. It enables the child to get closer to the parents and provides for a useful family exchange whereby all can benefit. It also lends realism and depth to the learning and ties together the school and the home. I hope to enlarge upon this next year.

Later the teachers reported progress.

> With the brighter group, I have found that they thrive in communicating ideas to each other, but in the beginning they didn't know how to do this well and it was a strain for them. Initially they rejected it. They often felt uncomfortable in a discussion and therefore tuned out--not at all happy at the fact that they were tuning out, but doing it as a protection in a way. I find now the students have more confidence in expressing themselves in front of a group. They are more willing to participate. They feel better for it. They get a feeling of satisfaction after a successful discussion. They will refer back to it for days.
>
> Some children who had always been loners began to participate in the group work. Now when the research is completed on a topic and the groups report their findings, the children really listen to each other.

Unfortunately, the Project had not planned on an objective measure of the children's growth in ability to communicate orally, but one need only compare the diaries of the teachers for the first and last years to note that participation increased, fluency improved, and confidence developed. In their final reports, all teachers commented on improvement.

> They are asking intelligent questions. They are definitely more fluent and able to criticize themselves, and to correct others with a little more humility.
>
> They are able to talk with the teacher and each other in a socially acceptable manner that leaves them with a pleasant positive feeling.
>
> The majority can now express themselves and are not afraid to talk. There are no non-readers now and they all seem to like to read aloud.
>
> Two stories that we read concerned Gotham. We discussed the background to the story of the town of wise men, which is also known as the town of fools. I asked the children to reconcile the two which seemed so opposed....How can people be both wise men and fools at the same time? The children didn't think it was possible, so they read the stories with enthusiasm to find out how it could be. The children discussed the stories very intelligently and resolved the conflict

> beautifully. There was much discussion by about three-quarters of each class and this continued in the discussion of all of the famous stories. I think that the reason for the active participation was that the children liked the stories, genuinely understood them, and were confident in their opinions which were guided by the daily rexographed question sheet which I provided.

The member of the College staff who visited classes each week kept informal records and noted the increased quality of discussion in all groups at the end of the second year. The following comments are from her notes:

> In some classes as many as two-thirds of the children entered into the discussion. In comparing my observations with last year's, I found that a much larger percentage of children now participate in discussion, and students also speak for longer periods of time and express themselves more fluently.
>
> Last year, students gave one word or one short sentence answers and practically all discussion was "teacher-pupil" on a one-to-one basis. This year I have seen several discussions where children actually listened to each other and commented on each other's points (whereas last year the only time they would do this would be to "make fun of" or criticize each other). Perhaps this is something that could be worked on more comsciously.
>
> Last year I frequently made tabulations of the number and kind of questions asked by students in a few classes. Usually one or two students asked questions relating to the work. This year, in most classes several students ask questions. Sometimes they were for clarification and sometimes for additional information.

Group work. The BRIDGE teachers found that long units which demand sustained research projects by small groups did not seem possible for these children. However, various ways of working together in small groups were tried, and eventually a few longer units worked successfully. The greatest problem the teacher had was trying to give enough attention to each group during the work phase of the activity. Children wanted the teacher's attention every minute, and of course there were a few who took advantage of the freedom and wandered out into the hall. As one teacher told it:

> In the newspaper unit I've divided the class into groups of from four to six pupils and they move their chairs and desks to work in these units. For instance, we have the fashion group, the editorial staff group, and so on. The first time we did it, it worked beautifully with 8-1. Incidentally, we work as an entire class. 8-2 presented more problems. For example, there was the day when Clarence got his bloody

> nose from being punched by David. Because of working in groups, and my working with one group at a time, my back was turned toward the door of the room and David had the opportunity to sneak out and be out in the halls without my knowledge. And this turned into quite a news item in school and caused several people to warn me not to work in groups again. Nevertheless, the following day I divided the class into groups again. But it does show the hazards of group work and I certainly learned a lot from this experience. I'd better keep my back facing the other end of the room and keep my eye near the door so that no one can come wandering in and out.

The next example shows how important it is to give careful directions and to help the students make a plan and keep a progress report.

> As a result of the success with taping of dialogue during the reading of the two novels, I judged correctly that an enjoyable and profitable unit would be a theatre unit. My expectations were more than realized in the eight weeks the unit lasted.
>
> The longest activity of the unit was the work leading up to the final presentation of two plays by each class. Each class was divided into two groups working independently on their own plays, to be presented at the end of the unit. The children selected which play they wished to be in. At the first group meeting, they chose a group leader (director) and a secretary. The secretary's job was to take minutes and fill in the activities chart I rexographed for them. For each date they listed what progress they had made. After the first day, the group leader (or director) took over his job and I acted only as an adviser or consultant.
>
> The most important result of this set-up, I would say, was that the children learned to work well together independently. They had a job to do and were anxious to complete it. The children cooperated with their leaders and fellow group members. They really worked together as teams.
>
> Of the six acting companies, two groups in each class, only one was unable to meet the performance deadline date. As a result, they had to admit they were unable to perform. Said the various children in the group: "We should have elected a stronger leader, someone we would listen to." "We needed someone who would make us work." "The other group is so well-organized." "We don't get anything done because we don't work together," and so forth.
>
> The non-performing group was bitter about not performing. They were ashamed they couldn't do better together. I think they learned just as much, or more, by not meeting the standards, than the other groups did by finishing their plays.

. . . .

By the ninth grade the children had improved their group-work skills. In a unit on occupations, the teacher reports:

> The children then broke up into groups or worked by themselves on the research. They got their information largely from the booklets which we had obtained from the New York Life Insurance Co. and other sources. I think the group work was successful because children with the same interests could share the work load, give each other information and share their own impressions and feelings in regard to their occupational choice. Some children who had always been loners before actively participated in the group work. When the research had been completed, each group gave a report of its findings. Again I was amazed to find the children really listening to each other and they learned a great deal about most well-known occupations. When each group had reported, they were to put their findings in a job chart which covered the whole back wall.

Again, the lowest class had the most difficulty working together. Cooperation was hard and there was resentment of student direction and leadership. Gradually, they, too, learned and were able to plan and work together without fighting. During the last semester, the science teacher gave this touching example:

> I found that few children were able to identify any of the flowers I brought to school. What further amazed me is that they knew nothing about seed plants. Here again I had assumed that many had experienced the growing of plants since they had little houses or had visited down south. They did know about cotton, but did not realize that cotton plants came from seeds. In their minds there was little or no connection between the seeds of a tomato and the plant itself.
>
> We used a textbook entitled Your Biology (Harcourt, Brace & World), a 7th grade book which the school purchased for the new curriculum. The book has excellent illustrations and many good reading selections. The children like the book and ask to use it. We used this as our guide.
>
> As we worked at identifying seed plants and discussing the many varieties, I asked how many had actually ever planted a garden. Out of 22 present, only 7 youngsters raised their hands. Barbara knew about plants and was happy to share her knowledge.
>
> After we talked about them and discussed vegetables and flowers, I asked how many wanted to plant their own seeds. All but Leonard, William, and John wanted to. These said, "That's baby-stuff." Charles organized the planting. We had soil, pots, and radish and pea seeds. Barbara advised the group (18 up at the front table) how to plant by

> reading the instructions on the seed packages. Charles divided the soil and Linda placed blotters on each hole in the bottom of the pots.
>
> I was in the background. As I watched I was happy at the fact that they functioned so well as a group--no quarrels--no name calling. Most of all, they were having fun. I was sad, too, to think how physically grown they are and how emotionally young they are--inexperienced individuals trying desperately to cope with the world. It saddened me more to think of the childhood pleasures so many of them have missed and how they need to experience so much of these elementary activities when they are young. They are all grown up physically, and so young emotionally.
>
> Each child had planted his own seeds. By the time we were finished, Charles had each pot labeled and the children were writing in their diaries what they had done. There was talk about planting and how wonderful it is to get so many different vegetables and plants from seeds. We recalled the story of Johnny Appleseed and the children all agreed it was really good. That afternoon we came back to homeroom early and Cheryl who was out in the morning asked me if she could plant her seeds. Leonard and William who thought it was kid stuff asked, too. While the others checked to see if their plants were all right, Charles aided Cheryl, Lennie, and William.

Providing Enrichment

Deprived children should surely be given experiences which will broaden their vision and quicken their perceptions. The problem for a new teacher is how to provide enrichment as well as the fundamentals, and how to use a variety of experiences to deepen basic concepts. As previously stated, these children cannot put together a myriad of diffuse experiences, and they become bewildered if they are given too many ideas to absorb at one time. The BRIDGE teachers discovered that if their plans were carefully structured, many so-called enriching activities could be used to help develop key concepts and to reinforce basic factual information. Non-text reading matter was often more interesting than the text; pictures and films often clarified ideas; and field trips stimulated questions and awakened curiosity. A staff evaluation of materials used is included in Appendix A.

Books, magazines and pictures. Although the Project had not set aside much money for additional materials, a small budget enabled the teachers and coordinator to select supplementary reference books, a small classroom library of fiction and short stories (chiefly paperbacks), and copies of one of the weekly Scholastic magazines for each child. In addition, books and film strips were often borrowed from the Queens College library juvenile library collection, and the teachers frequently provided magazines and pictures of their own. The children had few things to contribute, but they were encouraged to bring in what they had to share with the class. Often they found material that could be used in science class.

The teachers learned that just having an abundance of material did not guarantee that it would be used effectively. They had to stimulate interest in the books for free reading, sometimes by reading part of a story aloud. They had to know enough about a child's interests to hand him a book and say "I think you will like this one." They had to select the best filmstrips and films, not just use anything that was available.

If a variety of material for social studies units were to be used, the sequence and emphasis of the content had to be carefully planned, and the selection of anecdotes, essays, stories, and biographies had to be related to the development of the unit at the proper time. The following three examples from the social studies teacher's diaries illustrate these points.

> 8-1 used Building of Our Nation by Barker, Commager and Webb (Row, Peterson and Co.) as our basic text. I find that although the book is geared to a high level the class is able to absorb the material in it. The text isn't really adequate however. It is condensed and the pictures are poor. In addition, the class has used original sources and these have proved highly successful. In teaching about life in wartime Richmond, I distributed a copy of "A Rebel War Clerk's Diary" found in A Nation Divided (Webster Publishing Co.). The class enjoys materials which are varied. I find that with this group the more novel the approach, the greater the success. In teaching about sectionalism and sectional loyalty, we used original letters sent by Lee to his sister explaining his reasons for siding with his state rather than with the Union in the Civil War. This class has had a rather extensive sub-unit on abolition. We've found that using material with as much biographical focus as possible is a sure way to success. The personalization of history would improve instruction in all schools, but it becomes more important with our youngsters for it makes for increased motivation and greater interest in

the subject. Since motivation is really the key to learning in our situation, I find this material highly useful. The way we treated John Brown and the raid at Harper's Ferry can be used as a case in point. We used a section of the poem by Stephen Vincent Benet, pictures, part of a filmstrip, a dramatization, and text material for homework, as well as the song sung by Paul Robeson to enrich the basic material they were required to know. I find that because varied approaches were used even with the same personality, more students were reached by the information. The retention has been greater. We used materials ranging from legal documents to articles in Ebony Magazine to create a feeling for an emotional involvement with the period we were studying. I found that the discussions regarding color and race relations laid a firm foundation for the material that was to come in Frederick Douglass.

In the Canadian unit, 9-2 also used the How and Why Book, the Continental Ditto Sheets, and the Arrow Book of States, but also had a wealth of material published by the Canadian Government Tourist Office. These booklets--entitled Canada, Quebec, La Belle Provence, and Nova Scotia - Canada's Ocean Playground--were obtained in class sets. They are valuable for their magnificent illustrations and maps, as well as for the succinct written material. Since this class coincidentally had just completed a series of lessons on propaganda techniques, we looked at the booklets as one would at any kind of advertisement. The class enjoyed picking out the various methods used to promote Canadian tourists.

The country that I enjoyed teaching most was Egypt. Perhaps that is because we had the greatest amount of material on this country; perhaps because I have a special interest in it. One issue of Scholastic was devoted completely to Egypt. I had an excellent article on the advances that Egypt is making today and gave a large amount of space to discussing the role of the Aswan Dam in Egypt's future plans. The class discussed the Dam and drew interesting generalizations about farming in countries where there is a water shortage. In addition, the Scholastic had excellent write-ups which contrasted the life of the city dweller in Egypt with the life of the country peasant. The pictures also showed examples of Ancient Egyptian architecture. We spent an entire period reading the articles written by Egyptian students about the life they lead. We contrasted theirs to our own.

The Desert--a Coronet Film--was one of the best that we were able to secure all semester. It is in color which immediately lends more realism, and it has many pictures without interfering explanations at the bottom. In addition

> to generalizing about the conditions prevalent in the desert, and the necessary adjustments that one must make in order to survive and earn a living, it shows specific pictures that refer only to the problems of Egypt. It contains interesting pictures of Egyptians and explains in detail the mechanics of irrigation. It clears up any dreams that the pupils might have about the nature of an oasis, or the glamor of life on the desert.
>
> In studying the history of Egypt, we used the Bible. I thought it best to start with the history of Joseph, and the reign of the Pharaohs. We had pictures of the Valley of the Nile, and a bulletin board was prepared in conjunction with this lesson. (The pictures came from the National Geographic magazine.)
>
> We spent an entire lesson studying about the purpose of the pyramids, their construction, and their remains today. In doing this, we couldn't help but involve ourselves with a study of the Egyptian religion, and the rites involved with burial. This led us into a discussion of the influence of our own religious tradition on our burial procedures.
>
> We used the pictures from Compton's Pictured Encyclopedia accompanying the article on King Tut's tomb. A report on the article was presented by one of the students in the class.
>
> I showed my slides taken from the Israeli border. These were of the camels and of the U.N. refugee camps on the border. They saw pictures of the United Nations Emergency Force patrolling the Israeli border, and we had a discussion of the political situation in the Middle East.

Field Trips

Trips outside the immediate community are one obvious way of broadening the child's experience and adding to his meagre knowledge of the world today. The BRIDGE staff organized as many trips as possible, but there were the usual limitations of availability of busses and school regulations. At first the teachers felt that the trips should be tied directly to the unit of study. Later they found that although such trips can be worthwhile, they often fall short of expectations. Museum trips frequently have little impact because the students see too much, and unless a very good guide explains the objects and lets the students ask questions, they may simply whirl from one display case to another obtaining little or no information.

The greatest value of the trips, the teachers said, was in the things that happened along the way. Consequently trips were planned that did not directly relate to the curriculum, but which provided many new experiences so needed for the social development of the children. Pupils rejoiced in any new experience--riding an escalator, shopping in the big downtown stores, eating in a restaurant.

One of the teachers summed up the value of trips as follows:

> As we have said many times, trips need not have as their objective related learnings to ongoing units. Our most successful trips have been totally unrelated to school work.
>
> Small group trips--or class trips, rather than trips in which all three groups went together, have been the most successful. The children enjoy going to new places--eating out and seeing people. Most of them have had limited experiences in the world of New York City. I have found that objects of interest or sights along the way must be pointed out, otherwise the children don't seem "to see" what is going on. They are interested, well-behaved, and eager to experience whatever lies ahead....
>
> All of our children seem to feel that it isn't a worthwhile trip with too many children along. Perhaps what they mean is--they don't get enough individual attention when too many are along. They like to comment to you, and discuss with you what is happening at the moment. Our children need to share experiences with knowledgeable adults. Interpretations, explanation, and fear reduction are important factors on trips. Some children were afraid to go up the gangplank to the boat in the trip around Manhattan.
>
> One of the best trips with the lowest group was to the Aquarium. The student teacher and I took the class to the Aquarium and went to Coney Island's "Nathan's" for franks and french fries. The children were so tired they fell asleep on the bus coming home. They still talk about the day. They were most impressed with a class we met from another school and how they talked me into letting them go on the rides when I was so against it. They can still taste the french fries--and they remember how I went off my diet at Coney Island. Some of the children still talk about the walrus we saw doing tricks.
>
> Classroom preparation for trips cannot be overemphasized. Where-how-who-how long-what to eat and where-what to see--must be planned with the children. When we went to the Zoo, we got maps ahead of time. Limits must be set and adhered to by all the staff accompanying the trip.
>
> Follow-up bulletin boards are important, and a discussion of the positive and negative aspects of the trip are

> important, too. Students should be made to feel that what they have to say is important, especially in preparation for the next trip.

Sometimes the teachers took a few children on after-school or Saturday jaunts: to shows--shopping--to the College. Students liked these small outings immensely and the teachers learned much about the children from the informal conversation along the way.

Making outside contacts. The staff believes that much more use could have been made of resource persons. Several speakers, particularly Negroes, were brought in to talk to the children. The youngsters also enjoyed talking with adults they met on their field trips. The College contact, too, seemed to give the students a feeling of prestige. The role of the College Committee was not emphasized to the children, but almost all of them mentioned it in their final evaluations. They liked the fact that the College professors came into their rooms informally, knew them by name, listened to their problems, and helped them with their work. They were excited if they saw mention in the paper of College staff whom they knew. Two additional College staff members worked directly with the children when they were making costumes and learning songs for their African pageant. Most of this took place before school on a voluntary basis, and gave the children another contact with outside adults.

Conclusion

Although a teacher doesn't exactly have to play it by ear, she does need to be so skilled in methodology that she can use any one of a variety of techniques that will work with a particular group of children in achieving a particular goal. The BRIDGE children, when they came to the junior high school, were not prepared to work independently for any length of time, nor were they able to carry on class discussions for more than a few minutes. Beginning with concrete short-term tasks which had meaning and interest, the teachers had to guide the children step by step. Visual aids, stories, and experiments directly related to the topic gave extended meaning to basic concepts. Throughout their studies the children needed to know why they were doing something and how to do it. They needed to have specific directions and continuous appraisal--to know whether they were right or wrong. They also needed to be encouraged continuously and to be stimulated to ask questions. The teachers learned to structure lessons carefully but to change pace and activity if restlessness or apathy was evident. Patiently and gradually the teachers moved from more to less teacher-directed activity. Great progress was made in the students' ability not only in following directions and persisting at a task, but in developing initiative, responsibility, and cooperation. As stated in the examples, the children especially liked having the teacher read aloud, working on highly structured work sheets where they could check their progress daily, dramatizing stories, and using art materials to illustrate their social studies reports. Many were especially interested in the science laboratory work. Although they came with few manipulative skills, they learned to handle materials carefully and developed the curiosity to experiment and discover.

Chapter 6

Discipline

Discipline and the Beginning Teacher

Discipline is of supreme importance to the beginning teacher. No content or methods, no matter how well devised, can be successful in a classroom unless reasonable order prevails. Once he has "lost" his classes through poor control, the new teacher must struggle for months to rebuild his ruined image. In some instances, he may never quite succeed in re-establishing his authority and he may either leave the profession or remain to toil on in bitterness and ineffectuality.

Why do so many novice teachers have such difficulties in establishing an atmosphere for learning in the classroom? An obvious response would be their youth and limited experience. But a more subtle and pervading reason is revealed in student discussions. It lies in the basically negative connotations with which the word discipline has been invested in the minds of many of these young adults. They think of it as punitive, authoritarian, and essentially anti-democratic. Many of them have failed to develop the understanding which sees the positive role of authority in a democracy.

Whatever the causes, however, the fact remains that many beginning teachers have failed to establish value systems and levels of expectation which will give them adequate direction when they enter the classroom. They often show either an inability or a reluctance to establish and to enforce reasonable limits of pupil behavior. And in their eagerness to create an ideal classroom situation about which they have studied in their methods courses, they ignore the patient planning and minute steps necessary to achieve the necessary order.

Effective Discipline through Understanding

Pupil behavior in a classroom results from the interaction of many variables. Class size, pupil ability, peer interrelationships, type of learning activity, time of day, events of the preceding period, room temperature, outside weather, and teacher personality are among the myriad factors which influence pupil conduct. During the first year of the BRIDGE Project, one teacher wrote:

> I notice that when the children come back from lunch they are all worked up and can't be controlled. They all have to go to the bathroom. They all want to run out of the room. They are thirsty--they are exhausted--and they don't want to work. And this is a great disturbance during this period. I've also noticed that I am much too harsh with them. I am very, very strict and stern. And in a way they interpret this as not liking them, so they revolt.

The novice teacher reacts with shock and anger to pupil misbehavior. He is inclined to interpret it as being centered on him, personally. This often leads him into the error of constant jousting with individual pupils at every juncture until he finds himself literally with his back to the chalkboard and a hostile, unruly class aligned against him. Too often, either he resorts to stern, punitive, and oppressive measures or continues to struggle ineffectually and in frustration.

In order to establish strong and constructive relationships with his pupils, a teacher must become skilled in observing their behavior and in understanding its underlying causes. He must see that many outbursts are the result of frustration and boredom in the school situation. He must comprehend that lack of effort is caused in large part by fear of failure. He must realize that certain levels of language reflect cultural patterns; that often certain vulgarisms are not really intended to be so strong as they seem to the teacher. The teachers' diaries reflected their growing awareness:

> I noticed that the kids are becoming very familiar with each other and each day more of their personalities is revealed. Andwith familiarity comes the foul language, the abusive talk with everything we associate with this kind of behavior. We get such nicknames as nigger nose, beetle face, big lips, and this tends in a certain way to help gain the closeness of one to the other, but it also acts as a disruptive force in the room. And I have told them in my room they are not to use this kind of language.

> When children insult the teacher with cursing or hand movements, the teacher should be able to rise above the child's remarks and try to understand the reason for his actions; often we feel it is an act of hostility against us. Once in a while it is, but for the most part the teacher should be able to understand the why behind the child's action. . . .

> Our children need to have their actions accepted even though they do not necessarily have to be condoned. I learned that one cannot change behavior overnight. We will be lucky if we effect a change after a three-year period.

The development of teacher understanding of the culturally different child requires long and constant nurturing. The BRIDGE Project, with its opportunities for sharing of problems, for temporary withdrawal of disruptive pupils from classrooms, for supervisory assistance and for case study conferences provided a unique setting for this development. Together the Project staff set about studying the behavior of the deprived pupils in the Project classes. In conferences with the College Committee, they improved their understanding of pupils' actions and learned to deal with them constructively.

The teachers' perception of the reasons underlying behavior problems in their classes was developed dramatically in the first year of their work. The science teacher and the coordinator will long remember the morning Robert threw over his desk in a magnificent rage. Calm and soothing questioning revealed that this desk was not his; his could be identified by a certain mark carved on its surface. A brisk rearrangement of furniture to return the appropriate desk restored his security and the lesson could begin.

This kind of reaction was repeated in less spectacular ways many times among the children. As the pattern was studied, the teachers came to realize that there was a clear cause. Because so many of these pupils had very little property which they could call their own, they had a tremendous need for individual ownership of certain objects. Accordingly, when workbooks were secured for individualized mathematics work, the teacher and the coordinator made a small ceremony of going from desk to desk and lettering with a brush pen each pupil's name in bold characters on the cover of his book. The pride of ownership among the youngsters was pathetically understandable.

When another of the teachers attempted group craft activities during the first weeks of the Project, furniture was in dismaying disarray, paint was spilled on the floor, and pupils were squabbling among themselves. All three teachers reported pupil inability to assume individual responsibility, unwillingness to work cooperatively, limited capacity for adapting to new activities and routines, and constant rivalry for teacher attention. Disturbing manifestations of all this were found in calling out, in "hitting on" each other, in refusing outright to participate, and even, in the case of one youngster, in emptying the wastebasket on the teacher's desk and laughing hysterically.

> One of the reasons why group 7-3 is so difficult is the large number of problem cases in that class. Almost every child in the class has a physical, emotional, or mental (low IQ) problem. I am only one person. I cannot help every child at the same time. Over and over I find myself saying, "Just a moment, I have to finish with John," or "Save your individual problems until the whole class gets settled." Each person expects an immediate response to his query, if not sooner. He CANNOT wait. He has no inner controls. This is a world of babies in the bodies of teenagers when it comes to waiting or exercising controls.

Every infraction was noted and examined by the teachers and the coordinator. And as knowledge and understanding grew, teacher resentment and exasperation diminished. One pupil called out and shuffled and scrawled on his papers because he had what appeared to be a severe neurological impairment which required referral and treatment. Another scowled and shouted, "You're driving me crazy!" because his very slow cognitive style could not keep pace with the more able pupils in his class. An interclass transfer resulted in remarkable improvement in his behavior. A girl was obstreperous because she was the oldest child in a family where the father was dying and the mother was an alcoholic. Another youngster didn't respond in class because he was completely deaf in one ear. Still another roamed the halls and watered the plants all day because she was rootless, having been rejected by her mother and sheltered by a reluctant aunt.

In working to develop order and control, the teachers began to accept the importance of establishing reasonable limits for pupil behavior. They learned that much unruliness could be avoided by setting up definite routines, by structuring lessons carefully, by providing clear directions, and by suiting the work, wherever possible, to the interests and abilities of the pupils. A Project teacher reported:

> Only a teacher having taught in the situation we are in can really appreciate the importance of knowing how to prepare a class adequately either for a discussion, for moving

> furniture, for the distribution of papers, for lining up, for taking the attendance, or for collecting materials. The mechanics of running a classroom is possibly the most important aspect of getting off to a good start in a school like ours. A teacher can either succeed or fail depending upon the effectiveness of his routines and procedures....
>
> Through the case studies we came to know so much about the children that we were able to participate in a family-type situation. After one year, the children were like our own and therefore we knew more about what was expected and how to go about setting limits and goals for the next two years. As one of our children said, "Our teachers knew us so well. They sometimes knew what we were going to do before we did it."

The Project participants did not believe in a permissive atmosphere in the classrooms. Children were encouraged to express themselves, to question, to challenge; critical thinking was fostered; pupils were always entitled to ask questions and to receive honest answers; passivity and acquiescence were discouraged; but rudeness and disorder were unacceptable.

The task of establishing order and limits comes hard to a young teacher barely out of adolescence himself. An entry in a teacher diary illustrates this.

> I'm less experienced than anyone. I'm just beginning. There are tremendous problems here. I have a discipline situation to work out. I'm insecure in my relations with the kids. I'm insecure in my attitude toward their work and my work. I'm insecure in my relationships toward them personally. There are so many things I don't know. No one could be less prepared to work with the kids on this Project than I am.... Other teachers are reinforced by just having lived; I mean they are older than I am.... And this is a problem for me. I do have a certain amount of immaturity I must grow out of and it's very difficult.

The atmosphere which gradually developed in the Project classes was one of mutual warmth and respect. The kind of order which the teachers and coordinator found desirable was one in which the children were engaged in meaningful activity. Talking and pupil movement were acceptable at times when they did not interfere with the learning activities of the group. The disruptive behavior of individual pupils with emotional problems was controlled insofar as this was possible by quiet admonition. Whenever the entire class became disruptive, the teacher was free to voice his indignation and to impose sanctions (five minutes detention, and the like). But as the teachers matured, scoldings were given without anger and pupils who could see justice in correction were seldom resentful.

The climate which evolved in the BRIDGE classes was well suited to the needs of disadvantaged children. But similar conditions did not prevail in all classes outside the Project and the pupils frequently did not adjust successfully to working with other teachers who lacked the understanding and rapport achieved by the Project staff. Many complaints from these teachers reached the coordinator's desk. But class disturbances assumed critical proportions when a Project teacher was absent and a substitute instructor took over. Then, pupil inability to adjust to new situations coupled with resentment at being deprived of teacher understanding produced a chaotic condition. The substitutes shouted and threatened to no avail, and frequently it was necessary for the coordinator to assume the major portion of the teaching duties.

The substitute teachers were totally unprepared to accept the approach to order and instruction which was usually followed in the Project classrooms and many of them refused future assignments. (One such teacher expressed indignation to the coordinator that the children had not approved of her lecture, but had actually challenged several points which she had sought to establish.) The school administration shared this dismay and stated publicly that the children were "being spoiled by this experiment."

Conclusion

The maintenance of order and discipline remained a problem throughout the Project. Many of the Project children were self-controlled and receptive to the efforts of the teachers. However, the proportion of children with rather severe emotional difficulties was higher than might usually be expected in this number of youngsters. These children often engaged in behavior which was difficult for the teachers to control. The teachers reported that many of their pupils had difficulty in accepting individual responsibility, were unwilling to work cooperatively, had a limited capacity to adapt themselves to new situations, and engaged in rivalry for the teacher's attention. Occasionally foul language, calling out, fighting, sullen withdrawal, and pupil persecution of each other would disrupt the classrooms.

The Project efforts to meet this problem were based on the assumption that understanding and acceptance of the children combined with appropriate classroom procedures would do much to alleviate these difficulties. The teachers and supervisors shared their problems and engaged in both informal and formal study of the children. They gained insight into the intellectual, emotional, social, and physical characteristics of these children. They grew in their ability to establish and maintain the rules and procedure necessary for carrying on classroom instruction. They learned to prepare the children for changes, to punish without rejecting, and to assert themselves in a clear and forceful manner. Throughout the Project they sought to make more appropriate and meaningful the content and activities used in their teaching. The supervisor supported and gave direction to their efforts. Though Utopia was never achieved, progress toward better discipline was made.

Chapter 7

The Continuity Aspects of the Three-Year Program

> Our saving grace is time. The three-year program enables us to know and understand our students in ways that teachers in the regular junior high set-up cannot possibly do.
>
> What does caring about Charles do? How can a five-minute talk with Joseph help? What good does it do to repeat the same instructions again and again? Why is it important to demand that rules be adhered to? Why is it important that we set standards and stick to them? How can we possibly know what are the needs of our children? These and other questions can be answered, or at least considered because of the time element. Since progress with our youngsters is so slow and tedious we could not hope to answer these questions in a term, or in a school year of 188 days. Perhaps we have only begun to answer our many questions in these three years, but our time bonus is paying off in dividends we can hardly begin to measure. Time is needed to help orient the teacher to the needs, attitudes, interests, goals, feelings, and superstitions of the particular group. And, even though all of our children are from the same cultural background, each class unto itself is very different. Now that a year and a half has passed, some of us are recognizing and understanding for the first time our limitations, prejudices, and misunderstandings regarding the work we do with our youngsters. Every aspect of the work we do has some problems we do not anticipate, or read about, or regard with any importance. This continuity of exposure to each other gives us, as well as the children, a chance to grow. The children learn along with their peers, in preparation for what lies ahead.
>
> Science teacher,
> at midpoint in the BRIDGE Project

At the heart of the BRIDGE Project was its assumption that a three-year relationship among teachers, pupils, and supervisor would provide opportunities for teacher and pupil growth not present in the departmental, single-year organization of the traditional junior high school. The formal evaluation of the effectiveness of this continuity of relationships will be found in Chapter 8. In that chapter such conclusions as are reached are based on the data obtained from a series of tests administered over the three years of the Project. Many readers, however, may appreciate a less formal discussion of this idea which addresses itself to questions not likely to be answered by test data.

Experienced teachers and school administrators may want to know the feelings and reactions of the participants. Did they like or dislike this three-year enforced intimacy? What advantages did they see in it? What disadvantages? Did it lead to improvement or deterioration in discipline? Did the teachers find planning new units each year overwhelming? Did the pupils tire of the same old faces, especially if they had clashed with a teacher or disliked her? Was the beginning teacher handicapped by the lack of opportunity to begin over with different children?

In order to obtain information on such topics, the opinions of the participants were solicited. Since the beginning of each academic year seemed to be an appropriate time to collect comment on continuity, the teachers were asked to complete questionnaires in the fall of 1962 and the fall of 1963. The discussion in this section relies mainly on their responses to these questionnaires, though material from other reports is included if it is relevant. Since there was no identifiable shift in opinion from one time to the next, no effort has been made here to report the two responses separately. The coordinator, too, was asked to report her observations. On the whole they corroborated what the teachers said and are therefore included with the teachers' comments at appropriate points. Finally, as part of their evaluation of the Project, in June 1964, the pupils were asked several questions concerning their feelings about having the same teachers for such an unusually long time. Their reactions follow those of the teachers and the coordinator.

Teacher-Coordinator Reactions

The questionnaire opened with an attempt to probe the feelings of the teachers as they contemplated their return to work with the same pupils for a second year, and then for a third year. Did they view with pleasure or distaste the prospect of having the same children with all their deficiencies and difficulties? Apparently their feelings were mixed, though their predominant mood seemed to be one of anticipation. They knew the children well and were interested in them, not just as students, but as friends. Though not all of their relationships with pupils were satisfying, many were. Though they knew the extent of the academic, social, and emotional problems of many of the youngsters, they also knew their capacities for growth, responsiveness, and human warmth. Though they had failed at times, they had had success, too. It was true that they could not share with other teachers in the school the illusion (quickly dissolved, to be sure) that this year's classes would be filled with eager and docile students, but they could be sure that some of their pupils would be returning eager to see them and to get down to work. Above all they were curious to observe what the summer had wrought with these youngsters and hoped that the added months had brought a bit more self-control and more understanding of the values of the opportunities which the school offered. The intimacy of their knowledge, though in some ways a burden, gave them insights into strengths as well as weaknesses and removed uncertainty about the task ahead. In brief, they were like veterans returning to a familiar battleground, hopeful of victory, but chastened by knowledge.

One of the greatest concerns of teachers, usually varying inversely in intensity with their experience, is that pupils will not respect them. This anxiety is especially prevalent among teachers who work in difficult schools. The folklore of the teaching profession contains the adage that "familiarity breeds contempt." For the BRIDGE teachers the three-year continuity could easily have heightened this fear. Teaching the same pupils for three years is certainly a test of the validity of this statement. To some extent, the reactions of the BRIDGE teachers support it. In September of 1963, one of them, faced with the prospect of a third year with the same pupils, said, "The discipline problems seem to have worsened because of the familiarity of the children with each other and with us." Another stated, "I had my fears because I felt that discipline might be much harder. I felt that since they knew how we taught and behaved it would be a little more difficult to sustain interest in the class situation." One of the teachers felt that he would be haunted by the errors of previous years. Both his responses, though a year apart, contained statements illustrating this. "A teacher makes mistakes during the first year of teaching. Having the same pupils again forces a teacher to continue living with his original mistakes." And again, "I felt that some of the mistakes I had made hampered me in some of my behavior. It's like living with one's sins."

However, in other responses this attitude was contradicted. One teacher said, "It was much easier to look objectively at the entire situation....I felt that I had won the initial confidence of the pupils and this would be an advantage." Another said, "Having the same children gave me a lot more confidence both years....I felt that all the problems I had worked so hard on last year were more worthwhile when I should see the same children."

The questionnaire asked the teachers to comment specifically on discipline. School children, as a new year begins, often manifest classroom behavior which is unconsciously aimed at testing the disciplinary abilities of the teacher. How far can one go with her? Where does she draw the line between acceptable and unacceptable behavior? The teachers reported that after the first year such testing did not take place in their classes, for they and their pupils already knew each other well. The pupils knew the limits which each teacher set and her ability to maintain them. This did not mean that there were no discipline problems, but merely that the period of sparring did not take place. The advantages in the discipline area were expressed by the coordinator thus, "Our teachers were forewarned, and therefore were forearmed. Their skill in handling our difficult cases was not lost over the summer. On the contrary, definite plans had been laid for controlling some of the potentially dangerous situations." However, as the final year of the study began, one of the teachers still had reservations about the value of the continuity in the discipline area. The others felt that whatever shortcomings they might have in controlling behavior, their deficiencies probably should be attributed to other factors than the three-year relationship.

In commenting on teaching tasks other than discipline, the teachers unanimously approved the three-year continuity. In a traditional organization teachers often prefer to teach the same content year after year. They become expert, not in math or science in general, but in eighth-grade math or in seventh-grade science. They use the same lesson plans from year to year. In contrast, none of the teachers in the Project voiced regret that he was not using and refining last year's plans. On the contrary one said, "It's interesting to plan new units." Another said, "Much easier this year. I find that I can do much more advanced planning than I was able to do last year." Perhaps it just did not occur to these three young teachers that they might have said, "It would have been easier to use what I developed last year." In any case they reported unequivocally that knowing the pupils was a great advantage in planning for the new academic year. The coordinator summarized the opinion of the participants by saying, "Because of the understanding of pupils' problems and needs gained last year, the teachers were able to plan meaningful units and differentiated activities over the summer." One of the teachers supported this by saying, "This year's planning is much easier for me.... I never realized what a time I would have had if I hadn't spent weeks on preparation. Since I have never really taught the concepts in ninth-year science I was almost totally unfamiliar with the materials available. I was so pleased that the work dividends paid off for me the first week. I began immediately and set the tone for the rest of the weeks to follow. Planning units and re-writing and adapting materials and hunting down references takes time. When you have done this, lesson planning is a delightful experience. Everything is at your finger tips." The Project teachers, knowing in advance not only what subjects they were to teach but to whom they were to teach them, could better select their materials and activities and adapt them to the goals they set for their pupils.

The teachers were pleased and stimulated by their discovery of substantial pupil retention of learnings over the summer. Youngsters in difficult schools have reputations as expert forgetters. The teachers in the Project seem to contradict this general impression. One reported, "Most were able to recall much of what they learned last year with great pride." Another stated, "In some ways it seemed as though there had been no two-month interim." The science teacher described her experience in detail. "In science I found that much of what took place last year was retained. I was able to see this when I began my unit on the human body with the study of cells. We started the first week by using the microscope again. I began by thinking I would have to reteach the skills for use of the microscope. I found in most of the classes that recall was excellent. I finally decided to give them the diagrams of the microscope which we had filled out together last year and see if they could remember the parts and their functions. I would say that 95 percent of the children didn't have to ask me what to do. About 85 percent knew the parts and what they did."

Reflection on these observations leads to the speculation that forgetting among such children in the traditionally organized school may be simply a defense againse exposure of ignorance and failure. One way for the pupil to deflect criticism from the teacher who exclaims, "Didn't they teach you that in (seventh, eighth, sixth) grade?" is to answer "No." This answer relieves pupils of responsibility. An absent teacher has failed to do what he should have done and both the present teacher and the pupil can share disapproval and indignation. In the Project there was no such escape. The teachers know what they had attempted to teach, and the pupils recognized that the teachers knew what had been taught last year.

One of the most obvious areas of advantage of the three-year plan was in the teaching of school and classroom routines. Classroom practices could be carried over from year to year. The coordinator phrased it as follows, "While other classes in the school were busily involved inthe wearing 'Getting to Know You' period, BRIDGE children were taking pre-assigned seats and getting right down to business." One of the teachers, responding to the question of the effect of the three-year relationship on the teaching of routines, said rather enigmatically, "No effect. I only re-enforce that which has gone before--which is easier than starting all over again with a new group." Another stated, "I have an increased concern with routines this year and I find they come a little easier." In general, one can legitimately conclude that in such matters as seating, distribution of books and materials, entering and leaving the room, and taking down assignments and notes on class work, the habits of previous years were maintained with less effort than would have been involved in teaching these routines to a new group of students each year.

Examination of the responses of the coordinator and the teachers reveals a theme constantly reiterated that the three-year continuity gives the teachers the opportunities to use their intimate knowledge of the children for planning long-term attacks on the pupils' learning difficulties. After the teachers have diagnosed the individual shortcomings of the youngsters, and planned remedies for these weaknesses, they have a sufficient period to essay the consequences of their efforts. They have time, not only to discover the interests of the children, but to do something about them. This element is eloquently brought out in the statement of the science teacher with which this section begins. Their responses indicate that they had increased opportunities to be alert for signs of development and general maturation in the children and to adapt their plans to the changed conditions.

Since many of these children need the specialized help of social agencies other than the schools, the long-term relationship is especially valuable to teachers who recommend pupils for this assistance. They are able to cooperate with the agencies which give it, and then live to see its impact. In situations where teachers are constantly confronted with new children to teach, they are frustrated both in their efforts to obtain outside help for children by the length of time it takes to finalize a referral and to see its benefits to the recipients. The coordinator, who was usually responsible for following up the referrals, had the satisfaction of reporting to the teachers that children had been placed with appropriate agencies and then later feeding back to the teachers the ideas, plans, and programs which the agencies had arranged for the children. This activity is revealed in the following statement of the coordinator, "Certainly it would be naive to believe that the services of the social agencies have achieved marked improvement in pupil behavior at this early date. However, we in the school are reassured by the meetings we have with the case-workers, by the value they place on our handling of these children, and by the cooperative efforts under way to alleviate the problems."

The three-year relationship also provided opportunities to the teacher to experiment with the grouping of children in order to make arrangements which would best meet both the teachers' and the children's needs, abilities, and interests. Classes were reorganized at the end of each year and shifts of individual children were made during the academic year if the teachers and coordinator agreed that such a change would be beneficial.

The coordinator reported that methodological adjustments, which in the traditional setting teachers are often expected to adopt immediately, may very well take more than a year to accomplish. As a case in point, the coordinator, throughout the three years of the Project, strove to improve the adaptations made by the teachers to the varied levels of ability represented in the three classes. She stated in her evaluation, "Last year, the teachers were deceived into thinking that they had established communication with an entire class when only a handful of the more apt and outgoing students had responded to group activities. Meanwhile, the uninvolved relapsed into inattention, frustration, and disorder. This year, the teachers see just how much challenge must be provided for the abler 8-1's; how much background must be built for the needy 8-2's; and how much abridgement, slow pace, and repetition are requisite for the handicapped 8-3's." Similarly, in discussing individualization, she explained that individualized teaching methods "require pupils with a background of experience in such activities and with the ability to work independently. Since such pupils were not provided for us, we engaged in developing them." To achieve these skills often takes years, not months or weeks, of effort by the teachers.

The teachers supported her argument, pointing out that the achievement of most goals is a long-term matter. The teacher of mathematics indicated that a child is often not able to master a specific skill at the time when it is being presented to the entire class. Remembering this fact, the teacher can provide needed repetition in future units.

To achieve mastery of the basic arithmetic facts, some children may take several years. Failure to reassign the teacher who knows the problems of a given child is a needless handicap to the child's progress. In other subject areas, if the teachers are to promote verbal facility, to teach logical and critical thinking, and to develop self-control among pupils, they must have the time to understand the problem manifested in each child and to develop a program to meet his needs. The three-year continuity improved the teachers' chances of seeing whether or not their efforts were producing results, not only because of the time element, but also because the number of students to whom they must attend over a three-year period is radically reduced.

Finally, one particular aspect of the learning problems of the educationally disadvantaged seems especially well met by the three-year relationship. Many such children have suffered failure and exposure of ignorance over and over again in the schools. Their first interpretation of any testing program which seeks to diagnose their difficulties is that the teachers are engaged in embarrassing them once again. Consequently they will do almost anything to avoid this embarrassment. Many will lie, cheat, or simply refuse to try. The Project teachers had to spend many weeks convincing those pupils who were deeply afraid of continued failure that they were genuinely interested in helping them. When they had succeeded in breaking down this reserve, they could begin to teach. The three-year relationship capitalized on the mutual understanding which gradually developed between the teachers and the pupils.

The Children's Reactions

The children were not told in the beginning that they were part of a special project nor that they would have the same teachers for their major subjects for three years. It was thought that the less emphasis put on the fact that they were "something special," the better. Gradually they realized that the organization was somewhat different from that of the rest of the seventh grade, particularly because of the presence of the coordinator and the frequent visits of the College Committee. When they asked questions, they were told that the College was trying to improve its preparation of teachers, and was observing the pupils to see what their needs and problems were. They seemed to accept this, and only when the administration or the other teachers singled them out for correction and referred to them as "BRIDGE" pupils did they become troubled. The use of this designation in a derogatory way occurred chiefly in the second year and the BRIDGE teachers then gave the pupils a fuller explanation of the project. By this time they had become a rather united and loyal group and resented such criticism.

At the beginning of the second year (eighth grade), the students accepted having the same teacher without question. One of the teachers stated in his report, "The students felt happy at the beginning of the year at having the same teachers again. I expected them to express some resentment over this during the year, but there was none." "During the second term they spoke of the coming year and the work they would be doing in the ninth grade and the large majority were very happy that they were to remain with us."

In the ninth grade the students were frequently heard talking about how they would miss the teachers and each other when they went to senior high school.

To get a more systematic picture of attitudes among pupils, a questionnaire was prepared and administered the last week of June 1964. Forty-seven of the 59 pupils completed the questionnaire. Four of the questions probed attitudes about the continuity of teachers. In response to the direct question, "Did you like having the same teachers for three years?", all but one of the pupils answered "Yes." Another question was stated a little differently in order to check consistency of response. It read, "From your knowledge of children who have been in other classes or other schools, do you think the idea of having the same teacher for three years is a good one?" Here three said "No" and five listed both advantages and disadvantages while all the others gave an enthusiastic "Yes." They were asked to explain their answers. Some of the samples given below are touchingly astute.

"A better understanding between student and teacher." (This reply, variously worded, was given by all children who answered "yes.")*

"Yes we have a better chance to pass when they know your weak and strong points."

"Yes, another teacher might start all over from what you had last term."

"After three years you really feel you can express a problem of any sort that interferes with your work."

"I think it is good because the teacher could just about tell what you could do, and if you got into trouble she would know if you could be helped or not, like sort of a family."

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*Most students gave more than the one reason.

"Yes, I think it is a good idea because I learn more from these teachers than I could from anyone."

The explanations of the "no" answers were:

"No, because you don't get to know other teachers."

"Some students begin to take advantage."

"Well, sometimes teachers might let you get off easy because they like you a lot."

"No, the teachers will know pupils too well and therefore become too friendly."

A third question asked what they liked best about the BRIDGE Project. The most frequent response in all of the three classes was "the teachers" or "Having the same teacher for three years." The following comments were typical:

"The way the teachers were interested in your personal affairs."

"When you got into trouble the teacher would help you."

"The teachers have a good sense of humor."

"Well, best I liked the teachers and the way they helped us learn new things. We just liked them period! truly too."

"The teachers who taught us were very kind and took our effort into consideration."

"What I like best about BRIDGE is the teachers taking more time with the children than most teachers do. And they help you understand your work much more better."

The other question that gave some unsolicited indication of attitude toward the BRIDGE design was "What do you think could be done to improve junior high schools?" Over half of the answers referred directly to BRIDGE with such statements as:

"Have more BRIDGE Projects."

"Have same teacher for three years."

"Try the BRIDGE Project all over the U.S. I think it is a wonderful plan."

"Many colleges should take over certain classes as Queens College did."

"I think what Queens College did, is doing, in teaching teachers how to work with young people and finding their likes and dislikes is the improvement needed in junior high schools."

"More teachers like we had."

"By having a BRIDGE in every school."

Conclusion

This section has sought to answer, somewhat informally, some of the questions which teachers and school administrators might have about the reactions of participants to a small-school-within-a-school organization. In sum they all approved it. They saw the three-year relationship as giving them an opportunity to get to know each other in great depth. The teachers felt they were able to plan better as each year began. They felt that they knew the strengths and weaknesses of their pupils in detail and could tailor their plans and actions to the needs of the pupils as they understood them. They felt that the three-year period gave them the opportunity to provide needed repetition, to give sustained training in classroom routines, to break down psychological barriers to learning, and to follow the pupils' growth toward long-term goals. Perhaps they cherished most of all the feeling that they were given an opportunity to make an important contribution to the lives of pupils who needed them. It was only in controlling the behavior of the children that there was some feeling that the three-year continuity increased difficulties. Even here the teachers would probably agree that their shortcomings were more related to their general effectiveness as teachers than to the organizational framework within which they worked.

The pupils, too, with minor exceptions, reflected their teachers' approval of the plan. They knew they were well known. They knew that some pupils took advantage of the affection and concern with which their teachers regarded them. But they had lived in a junior high school for three years where teachers reacted to them as individuals, and tried to help them.

Chapter 8

Objective Measures of Pupil Growth

Purposes of Psychological Studies

The inclusion of a full-time psychologist on the BRIDGE Project staff made it possible to carry on a fairly elaborate testing program involving individual psychological tests of intelligence and personality as well as group tests of achievement, intelligence, and personality.

The testing program was planned with a number of purposes in mind.

1. Achievement tests were given at systematic intervals to experimental and control populations to provide data regarding initial achievement status and growth in achievement during the three-year period. The achievement tests made it possible to evaluate the relative improvement of these groups insofar as the standardized test battery used is valid for this purpose. Since continuity of relationships between pupils and teacher was a crucial part of the Project, it was hoped that comparison of achievement growth in the first, second, and third years would reveal whether or not there was a cumulative effect of such continuity, such as might be inferred from accelerated gain in achievement in the final year.
2. Two intelligence tests, the Wechsler Intelligence Scale for Children and the Cattell Culture-Fair Test, were selected to shed light on the intellectual abilities of the children. It was hoped that these tests would provide answers to such questions as:
   a. Is there a real drop in the intellectual abilities of these children as they get older?
   b. What kind of change in IQ, if any, took place in the course of the Project? Was there a significant difference in IQ change between the Project students and Control Groups?

c. Is the pattern of intellectual abilities different in this kind of disadvantaged group from that of the general population? Do these children score significantly higher on some sub-tests and lower on others as compared to the normative group? Will factor analysis reveal the same underlying pattern of abilities, or a somewhat different set?

d. How do group IQ tests compare with the individual WISC results for this population? Does a "culture-fair" group intelligence test produce significantly higher IQ's than the tests used city-wide before and during this project? Are the group tests used in city-wide testing programs adequate measures of the intelligence of these children?

3. Personality measures of several kinds were included in the plans for the Project. These included two projective tests (the Rorschach Ink Blot Test and the Rosensweig Picture Frustration Test), a personality questionnaire (the Barren Ego-Strength Scale), and a semi-structured interview. A measure of family stability, based on record-card data, was also developed, and attendance and tardiness data were recorded. It was hoped that they would help answer a variety of questions:

a. Are the attitudes of these children toward taking personality measures such that reasonably valid responses can be obtained? Are certain approaches in personality appraisal better than others in this regard?

b. Are the personality characteristics of these children sufficiently alike so that group personality sketches can be written? Or is diversity and variety of traits and adjustment patterns the rule?

c. How do the personality characteristics of these children compare with those of other young adolescents for whom comparable data are available?

d. Do measured personality characteristics correlate with educational achievement significantly in this population?

e. Are attendance, tardiness, and leaving the school related to the test data? Are there significant differences in these respects between the Project and Control Groups?*

The Psychologist's Role in the Project

The psychologist's role in the Project was that of collector and analyzer of research data. His contacts with the pupils were essentially confined to the administration of tests. Since most of the tests were administered to both the Project Group and the Control Group, both groups got to know him about equally well.

He did not function in the usual role of a school psychologist as a diagnostician, counselor, or psychotherapist. He did, however, participate in the case study sessions on individual pupils, and for each case study prepared a one-page summary of the psychological test results for that child. He did not take part in the curriculum planning nor in classroom activities.

The research role for the psychologist was chosen deliberately. Since the focus of interest of the Project was on the teachers' problems, the effects of continued pupil-teacher relationship, and the implications for teacher education, the decision was made not to provide any extra guidance or psychological services for the Project group. This policy was strictly maintained, although at times when the need of a child for immediate help seemed urgent, the wisdom of adhering to it was questioned by the teachers. The Project and Control Groups had equal access to the guidance facilities of the school and to community resources.

Since the psychologist shared a large room much of the time with the Project coordinator, he was inevitably cast in the role of sympathetic listener on many occasions. He generally refrained, however, from offering advice on how to solve the many problems and meet the many emergencies requiring the coordinator's attention.

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*Questions 2a and 2b are considered in this chapter. The remaining questions above are treated in Chapter 9.

The pupils varied in their awareness of the psychologist. Some were not visibly aware of him for a substantial period of time, showing little curiosity about him or his role. Some were curious and still puzzled after explanations, while some were alert and suspicious, equating the psychologist with psychiatry. Assurance that they were mistaken did little to modify their opinions.

General Design for the Psychological Studies

The subjects in the major study were all the children (except for a class for children with retarded mental development) in the class entering the seventh grade in September 1961. All of the children were Negro except for one white girl, two Chinese girls, and 12 Puerto Rican children. The Project Group was chosen from the entire entering class by means of a table of random numbers.

The Project Group consisted of 85 children, 40 boys and 45 girls, assigned to three classes with an average register of 28.3 pupils. The Control Group consisted of the remaining 111 seventh grade children, 50 boys and 61 girls, assigned to four classes with an average register of 27.8.

Substantial attrition took place during the three years of the study; the numbers remaining who took the final achievement battery in May 1964, were 57 in the Project Group and 73 in the Control Group. Pupils left for such various reasons as: moving out of the district, transfer to a "600" school (for severe emotional and/or disciplinary problems), juvenile delinquency resulting in residential placement, chronic truancy, and pregnancy.

As these pupils left the Project, they were replaced by incoming students so that class size remained approximately constant in the Project and Control classes. These newcomers were fully assimilated into the instructional program, but are not included in the statistical findings.

The Project Group was started with one class of the lowest-scoring children and two classes approximately equal in ability, with approximately 28 children in each. At the beginning of the second year, the children were rearranged into three relatively homogeneous classes. Placement was determined mainly according to reading achievement, but was influenced in some cases by social and emotional factors. This re-grouping was done by the teachers and the coordinator as a committee. The lowest class was kept smaller than the other two, but in the opinion of the staff it was still too large for effective teaching and learning. Occasional inter-class transfers were made whenever the coordinator and teachers agreed that such transfers might improve adjustment.

The Control Group was divided into four relatively homogeneous classes from the start, with the lowest class kept smaller than the other three. These classes in general followed the standard junior high school curriculum for New York City.

A second Control Group was sought, with the expectation that its results would be helpful in two respects: It would help to determine if results in the Queens school were typical of special service junior high schools with Negro populations in New York City; and it might help to determine whether the Control Group results in the Queens school were influenced by a Hawthorne effect.

For this second Control Group (C II), the cooperation of a large special service junior high school in the Harlem section of New York City was obtained. Since the entering seventh grade was very large, a one-fifth sampling was chosen by means of a table of random numbers. These children were given four of the Metropolitan subtests (Word Knowledge, Reading, Arithmetic Computation, and Arithmetic Problem Solving & Concepts) near the beginning of the seventh grade. Those of the group remaining in the school in May 1964 took the same four sub-tests again. Aside from the achievement pre-tests and final tests, this school was not involved in any activities of the BRIDGE Project.

Time-table for the Testing Program

The Wechsler Intelligence Scale for Children was administered twice to the Project and Control Groups. The first administration was completed by February 1962. The second administration extended from late October 1963 to March 1964. The interval was, therefore, a little over two years on the average. Although it would have been desirable to have an interval of nearly three years, the slowness of individual testing made that impossible.

The Metropolitan Achievement Test, Complete Battery, was administered to the Project Group and Control Group four times, as follows:

Intermediate, Form A	- Sept. 1961
Intermediate, Form B	- May 1962
Intermediate, Form C (Advanced Form C for those with IQ 85 and up)	- May 1963
Intermediate Form A (Advanced Form A for those reading 7.0 and up)	- May 1964

The second Control Group (C II) took four sub-tests in October 1961 and again in May 1964.

The Cattell Culture-Fair Test, several personality tests, and a battery of attention tests were administered by the Project psychologist during the second year (1962-63).

Results

1. Status at the Beginning of the Study

Obviously, if legitimate comparisons were to be made between children in the Project classes and those in the Control classes, it was important to check on the similarity of the two groups at the beginning.

The Wechsler Intelligence Scale for Children (WISC) was administered individually to all of the seventh-grade children in the Project school as early as possible in the school year.* Eleven sub-tests (all except Mazes) were given. Project and Control children were tested in an approximately alternating sequence. This testing included all of the 196 children who had taken the Metropolitan Achievement Test and were still in the school at the time the testing was completed in February 1962.

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*In order to test as many as possible before much of the school year had passed, 82 sixth-grade children in two "feeder" schools, who were expected to enter the Project junior high school, were tested during June 1961. Of these 82 children, 61 entered the Project school in September. About half were tested by the staff psychologist and half by a temporary associate. All records were scored by both examiners. There was no significant difference in the mean IQ's obtained by the two examiners and no significant difference between the 61 who entered the Project school and the 21 who did not.

The results on the WISC are shown in Table 8.1.* The mean Full Scale IQ for the entire seventh grade, 89.01, falls at the upper limit of the "dull normal" category. The Control Group was slightly higher in Verbal, Performance, and Full Scale IQ's, the differences being 0.3 points in Verbal IQ, 3.7 points in Performance IQ, and 2.1 points in Full Scale IQ. When boys and girls are considered separately, the Project Girls are seen to have been about five points lower than the other three groups (Control Girls, Project Boys, Control Boys). The latter three groups were similar in means and variability. (see Table 8.2). As can be seen from Table 8.4, these differences (tested by means of a discriminant function analysis of the 11 sub-test scores) fall within the range of chance variation in samples drawn from the same population.

The Metropolitan Achievement Battery, Intermediate, Complete, Form A, was administered to the entire seventh grade in October 1961. The mean grade scores for the ten sub-tests and median grade score are shown in Table 8.3. In median grade scores the Project and Control Groups were identical, at 5.1 (beginning fifth grade). Differences on the sub-tests were quite small and the discriminant function analysis (see Table 8.4) showed that the differences were well within the range of chance variation.

To check on the possibility that similarity in group means might conceal a sex difference, the initial results were also considered by sex. For this, the intelligence and achievement results were combined, and the discriminant function analysis shows the differences between Project and Control Groups to be well within the range of chance variation when boys and girls are considered separately (see Table 8.5).

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*All tables are given in Appendix C.

It is clear, therefore, that the random assignment of children to the three Project classes and four Control classes provided groups that were substantially identical in intelligence and achievement at the beginning of the Project.

2. Initial Status of Final Population

In a school with a severely disadvantaged population, a high rate of pupil turnover is usual. One of our initial concerns was the possibility that not enough children would remain in the school to make a satisfactory study of their progress feasible.

The group did shrink, but not as much as had been feared. Of the original 196 children, 179 took the second Metropolitan in May 1962; 146 were present for the third testing in May 1963; and 130 (57 Project, 73 Control) completed most of the final achievement testing in May 1963. Thus two-thirds (67 per cent of the Project Group and 65 per cent of the Control Group) remained for the final testing.

Were the children remaining in the Project and Control groups also equivalent in initial ability and achievement? As shown in Table 8.6 there was enough of a difference on the WISC to make this doubtful. On the Metropolitan the Project and Control Groups did not show a significant difference. On intelligence and achievement combined, the difference was large enough to reduce the probability of its being a chance variation to less than one in ten. The means for the WISC IQ's and median achievement are given in Table 8.7. The Control Group was consistently the higher, but only in the Performance IQ was the difference clearly significant.

Were the children who remained part of the Project different from the ones who left the Project during the three years? In both Project and Control Groups, the group who stayed for the duration had slightly higher means than the total beginning population, indicating that those leaving the school, mainly transfers to other schools, tended to be a little below the group averages. The differences are consistently greater in the Control Group than in the Project Group, although the significance of the discrepancy is doubtful.

The fact that there were consistent, if small, differences in IQ and achievement in favor of the Control Group at the beginning makes it necessary to adjust for this in evaluating change during the three-year period. This can be done by using gain scores in addition to final mean scores.

Despite the random selection procedure and the close equivalence of total groups, there were marked sex differences as shown in Table 8.8 The Project Boys averaged more than six points higher in IQ and six-tenths of a year higher in achievement than the Project Girls. The Control Girls averaged one point higher in IQ and six-tenths of a year higher in achievement than the Control Boys. It is also evident that the Project Boys were higher than Control Boys in Verbal IQ, Full Scale IQ, and Median Grade Score at the beginning, while the Control Boys were slightly higher in Performance IQ. The Control Girls were substantially higher than the Project Girls in all three IQ's and in achievement. Although these differences tend to cancel out when boys and girls are combined, it does not seem wise to ignore them. Therefore most of the results to be presented from here on will be treated separately for boys and for girls.

3. Changes in Intelligence in Project and Control Groups

Would participation in the Project have any effect on the IQ's of the children? From the start this was considered one of the major questions for the testing program to answer. As has been mentioned earlier, at the meeting which stimulated the planning of the Project, Dr. Loretan had reported that there seemed to be a declining trend in the IQ's of seriously disadvantaged children in the New York City schools, with the sixth grade Otis IQ's substantially lower than the first grade Pintner-Cunningham IQ's.

The main reason for using an individual intelligence test in the Project, despite the high cost of the individual administration, was to see if this picture of a declining IQ would be verified or negated, at least for this school population. The WISC was preferred to the Stanford-Binet because of its greater comparability of content at different levels of functioning, its inclusion of more non-verbal tasks on the Performance Scale, the possibility of limited clinical interpretation of the sub-test profile, and its amenability to factor analysis.

Comparisons of the WISC results with results on several group intelligence tests administered to these children at various times in their school careers will be made in Chapter 9. For the present we are concerned only with the WISC results themselves.

The WISC results for the boys are shown in Table 8.9. On the first administration, the differences between Project and Control in Verbal, Performance, and Full Scale IQ were all within the range of chance variation.* On the retest in ninth grade, the Project Boys were 8.50 points higher in Verbal IQ, a very significant difference, and 4.22 points higher in Full Scale IQ, a probably significant difference, while the difference of 1.59 points in Performance IQ in favor of the Control Group is not significant.

The changes from seventh to ninth grade, shown in the bottom third of Table 8.9 are the most important data in the table. The Project Boys gained 6.25 points in Verbal IQ while the Control Boys gained only 0.28 points, a difference of 5.72 points. The two groups made about equal gains (3.21 and 3.03) in Performance IQ. In Full Scale IQ, the Project Boys gained 5.32 points as compared to 1.78 points for the Control Boys, a difference of 3.54 points. The greater gains made by the Project Boys in Verbal and Full Scale IQ's are clearly significant and well outside the range of probable chance fluctuations. The probability that the differences in Verbal IQ gain and Full Scale IQ gain could occur by chance is less than one in a hundred.

The corresponding results for the girls are shown in Table 8.10. On the first administration, in seventh grade, the Control Girls were 5.76 points higher in Verbal IQ, 6.51 points higher in Performance IQ, and 6.72 points higher in Full Scale IQ.

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*All these comparisons are based on the final Project and Control Groups, eliminating those who missed either the Metropolitan testings or the second WISC.

On the ninth grade retest, the Control Girls were the higher, but by lesser amounts: 4.10 points in Verbal IQ, 3.06 points in Performance IQ, and 4.26 points in Full Scale IQ.

The gains from seventh to ninth grade are greater among the Project Girls by a substantial margin in all three IQ's. The Project Girls gained 3.00 points in Verbal IQ compared to 1.17 for the Control Girls; 4.38 points in Performance IQ compared to 1.93 points; and 4.27 points in Full Scale IQ compared to 1.81 points. The differences in gains are consistently greater among the Project Girls: 1.83 points in Verbal IQ, 2.45 points in Performance IQ, and 2.46 points in Full Scale IQ. These differences are not so great as those among the Project Boys. While they do not fully meet the test for statistical significance, they are unlikely to be due to chance fluctuations because of the consistency of the trend.

When the scores of both sexes are combined, the total Project Group gained 4.81 points in Verbal IQ, 4.92 points in Performance IQ, and 5.25 points in Full Scale IQ, compared to 0.94, 2.67, and 1.96 points for the total Control Group (see Table 8.11). The differences in gains between the Project Group and the Control Group are 3.87 points in Verbal IQ, 2.25 in Performance IQ and 3.29 points in Full Scale IQ. The differences in Verbal and Full Scale IQ are highly significant. The difference in Performance IQ has a probability of less than 10 per cent of arising by chance.

It is necessary to inquire about the possibility that these apparent gains in IQ might be artifacts resulting from a practice effect on the tests, from greater familiarity with the examiner, or from examiner bias.

The reliability of the WISC is given by Wechsler for children age 13-1/2 as .96 for Verbal, .90 for Performance, and .94 for Full Scale Scores. (44) These coefficients are based on even-odd split half scores obtained from a single administration. No data are given in the manual about test-retest reliability, or about practice effect. Cronbach, reviewing the literature recently, stated: "There is as yet little evidence on the stability of Wechsler scores," and the one study he cited used the Wechsler-Bellevue, not the WISC. (9) Lack of data on practice effect was also noted by Littell. (24)

We have been unable to find any published information about practice effect on the WISC for young adolescents when two administrations are separated by two or more years. Therefore in considering whether practice effect has influenced present results, we have to rely on analysis of present findings.

First we may consider whether the examiner introduced a differential factor. We were, of course, fortunate in being able to have most of the first administrations and all of the retests given by the same psychologist. All scoring was rechecked by another psychologist (who did not know the identity of the groups) and occasional differences in scoring were reconciled, referring to the Manual; this, we believe, prevented any possible unconscious bias from influencing the scoring. By the time they took the WISC the second time, the Control Group pupils were practically as accustomed to the examiner as the Project Group pupils; he had given them the first WISC, the Metropolitan three times, and the Cattell and Rosenzweig tests.

The Project Group did have a little greater contact with the staff psychologist. He tested them by means of the Rorschach and certain other brief procedures which were not followed with the Control Group. But it was realized that in a study of such long duration the psychologist might easily become involved in a quite human way with the Project population. Therefore, without prejudice to his professional role, he made a determined effort to remain uninvolved with either group in matters of discipline, guidance, or clinical service. With the exception of informal consultation with the Project staff and the provision of written reports for the case studies, no clinical services were provided.

If there had been any unconscious favoring of the Project Group in the administration of the WISC, it should have been present in the initial, as well as the final, testing and therefore should not influence the relative size of the gains. Finally, there is no evidence of his having favored the Project Group in the first or second administration. A comparison of results from testing in June before the assignment to Project and Control Groups was made with results from testing after the formation of the groups revealed no significant differences. In addition, there was no significant difference between those tested twice by the same examiner and those tested initially by a different examiner. We believe that the precautions taken and the results obtained make it unlikely that there was any substantial biasing of the testing to favor the Project Group.

Our results do not show clearly whether or not there was a practice effect. It should be noted that the Control Group gained less than a point in Verbal IQ, and less than two points in Full Scale IQ. The Control Group gained 2.67 points in Performance IQ, which might be a practice effect. These results suggest that there was practically no practice effect on Verbal IQ; that there may have been some practice effect on Performance IQ, and that the Full Scale IQ may show less practice effect than the Performance IQ. Practice effect does not seem to make up any significant part of the gain in Verbal IQ, in which the Project Group in ninth grade showed a highly significant superiority over both its own seventh grade results and those of the Control Group in ninth grade.

IQ Changes by Levels of Ability[*]

It seemed quite possible that there might have been some differences in intellectual gain related to levels of ability. Were the classroom learning opportunities in the Project classes more favorable to the brightest? to those near the middle of the entire group in ability? or to those with the lowest IQ's? To check on this, the Project and Control Groups were subdivided into three levels according to Verbal IQ in the first WISC testing. The "low" group contained those with initial Verbal IQ's

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[*] In a paper by A. J. Harris entitled "Intellectual Performance of Disadvantaged Junior High School Students," presented at the Philadelphia meeting of the Eastern Psychological Association on April 17, 1964, a preliminary version of the present results was reported, based on a Project Group of 61 and a Control Group of 76 as compared to 57 and 73 in the present report. The final Project Group lost four children and the final Control Group lost three after that report, due to lack of final Metropolitan results. The gains reported in that paper did not differ significantly from those reported here. In that preliminary report, the results were not broken down by sex.

84 or below; the "middle" group had Verbal IQ's from 85 through 94; and the "high" group were those with Verbal IQ's of 95 and above. These intervals were chosen so as to result in groups as nearly equal in size as possible. Results were treated separately for boys and girls even if this left rather small groups, because of evidence of sex differences of at least probable significance. With such small groups, a difference must be of quite substantial size to meet tests of statistical significance.

The results of these comparisons are given in Tables 8.12 to 8.17 inclusive. Considering the results for boys first, the Project Boys showed consistent gains in all three IQ's at all three IQ levels. In Full Scale IQ, the low group made the largest gains, the middle group next, and the high group the least, but even the high group made a mean gain of over 4 points in Full Scale IQ. The high group made a quite impressive gain of 6.07 points in Verbal IQ, but their gain of only 1.2 points in Performance IQ was the lowest of the three Project sub-groups.

The Control Boys did less well than the Project Boys in eight of the nine gain scores; they came out ahead only for Performance IQ in the high group. In Verbal IQ, the high and middle Control Boys actually showed slight losses, and their slight gains in Full Scale IQ were due to the gains in Performance IQ. At each of the three ability levels, the Control Boys failed to match the Verbal IQ gains of the Project Boys by a substantial margin.

The IQ results for girls are shown in Tables 8.15, 8.16, and 8.17. In the low groups, the Project Girls gained 4.00 points in Verbal IQ as compared to 0.55 points in the Control Group; 5.91 points in Performance IQ as compared to 4.45; and 5.25 points in Full Scale IQ as compared to 2.64. In the middle groups both Project and Control Girls showed substantial gains with the Project Girls slightly higher. In the high groups, neither group gained or lost; the means remained unchanged.

It would seem that for the girls, conditions favorable to intellectual improvement were present for the low and middle groups, but were not present for the high groups. This was true for both the Project and Control Girls, but it should be noted that there were only six girls in the high Project Group. Differences between Project and Control Girls were smaller than for the Boys. Nevertheless, of the nine gain scores, eight favored the Project Girls.

Large gains in IQ (of 10 or more points) were made by substantially higher proportions of the Project Group than of the Control Group (see Table 8.18). This was strikingly apparent in Verbal IQ (21 per cent Project, 7 per cent Control) and Full Scale IQ (21 per cent Project, 4 per cent Control). It was only less striking in Performance IQ, in which 30 per cent of the Project Group and 14 per cent of the Control Group gained 1.0 or more points. Conversely, the Project Group had substantially lower percentages who dropped in IQ or did not change.

In the Project Group, far more boys than girls showed large gains. In Verbal IQ, for example, nine out of 28 boys (32 per cent) made gains of 10 or more points, as compared to three out of 29 girls. Of the twelve, seven were in the high IQ category originally, three in the low category, and two were in the middle category. Only five of the Control Group made such gains, four of whom were in the high IQ category and one in the middle category. None of the Control children in the low category made a large gain.

In summary, the Project Group as a whole surpassed the Control Group in IQ gain by a significant amount. For the boys, the greater gain was mainly in Verbal IQ and amounted to almost six points. For the girls, the differences in favor of the Project Group were smaller and more evenly divided between Verbal and Performance IQ's. Among the boys, there was a fairly consistent gain regardless of initial IQ level. Although there was a slightly greater average gain at the low level, the largest number of big gains took place in the high group. Among the girls, gains in IQ were found at the low and middle levels, but neither Project nor Control Girls of initially high IQ showed any mean change. Gains of 10 points or more were made by nearly one-third of Project Boys, a very striking result.

Changes in Achievement in Project and Control Groups

The Metropolitan Achievement Tests had originally been chosen as the standardized measure of achievement for this study for several reasons. The battery includes sub-tests which cover all the academic areas taught in the regular school curriculum. It was widely used in the New York City schools. It had several equivalent forms. It had good reliability. It was provided with standard scores as well as grade equivalent scores. Its norms were based on a large and carefully chosen national population of over one-half million.

For the first two administrations (at the beginning and end of the seventh grade), the Intermediate level was used. This level, generally intended for use in fifth and sixth grades, was actually a challenging test for most of the children and a frustratingly difficult one for the low achievers. By the end of the eighth grade it was felt that the more capable pupils should be given the Advanced Battery. Those with IQ's on the Pintner General Ability Test (given city-wide in the middle of the eighth grade) of 85 and above took the Advanced; the rest took the Intermediate. This conformed to New York City policy. Such a practice is open to a number of criticisms in spite of the high correlation between the Pintner and reading comprehension. For this reason, for the ninth grade testing, a somewhat different basis was used. In January 1964, a city-wide reading test was given (Metropolitan, Form D); those who scored an average of 7.0 or higher on this took the Advanced Battery in May 1964, while those who scored 6.9 or lower on the January reading test took the Intermediate Battery in May.*

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*For statistical treatment, all Advanced scores were translated into their Intermediate equivalents, using the tables of grade equivalents and standard scores, provided in the respective manuals. A special problem arose with regard to standard scores above the minimum needed for a grade score of 10.0 plus, the highest provided. This was solved by adding to the Intermediate standard score that corresponded to 10.0, the number of points by which the Advanced standard score exceeded the 10.0 minimum. The fact that the Advanced and Intermediate standard scores are not directly comparable was not realized until after the first use of the Advanced Battery. If it had been realized earlier, preference might have been given to an achievement battery in which the standard score scale is continuous across levels.

We think that this provided the best available combination of levels, considering suitability in both difficulty and relevance to the curriculum. Although the Metropolitan manuals do not provide a total or average grade score, the publishers of the test were consulted and recommended taking the median of the ten sub-test grade scores. The median was preferable to the mean in this case because it is less affected by scores falling above or below the grade score scale.

The means of the median grade scores for the final Project and Control Groups are shown in Table 8.19. Although the initial groups had identical mean grade scores of 5.1 in October, 1961, the 57 Project children who completed the fourth testing had an initial mean of 5.20, while the 73 Control children had an initial mean of 5.33. The Control Group's lead was not large enough to be statistically significant, but was consistently maintained during the three retests.

When expressed as achievement gains (see Table 8.20), the progress of both groups is seen to have been approximately equal. The Project Group gained 1.90 years; the Control Group, 1.98 years. The difference--less than one-tenth of a year--is not statistically significant.

Considering the period covered (2 years, 7 months), these gains of a bit less than two years seem somewhat disappointing when compared with the national norms, but actually are good according to results of comparable schools in New York City (see data on Control II Group in the section which follows). Both groups seem to have made their best gains during the first year. The Project Group dropped to a gain of 0.44 during the second year, but improved to a gain of 0.67 in the third year. The Control Group made its least gain during the third year. The small size of the differences involved makes their statistical significance doubtful. So far as the Project Group is concerned, however, the trend shown here is in agreement with staff opinion that the second year was the low point of the Project, with considerable improvement in the final year.

Achievement in the Second Control Group

The Committee, recognizing the desirability of comparing the results in the Project school with those obtainable in a similar school, made arrangements to give achievement tests in October 1961 and May 1964 to a random sampling of those entering the seventh grade in September 1961 in a junior high school in central Harlem. This school was selected with the advice of Deputy Superintendent Loretan because it had a similarly high percentage of Negro students and had made scores similar to those of the Project school in previous city-wide tests. The neighborhood from which this second school draws its population is at least as unsatisfactory an environment for child development as the neighborhood in which the Project school was located. With the cooperation of the principal and staff, the same forms and levels of the Metropolitan were used as in the Project school. Testing was restricted to four sub-tests: Word Knowledge, Reading, Arithmetic Computation, and Arithmetic Problem-Solving and Concepts, and was conducted by the Project staff.

In the initial testing of this Control II Group, approximately 80 children who had been chosen by means of a table of random numbers from the very large seventh grade population were tested. One hundred had been selected, but through some fault in communications, as well as absences, one-fifth of the group selected did not come to the testing room. For the retest near the end of the ninth grade, a strong effort was made to bring together all of the initial group who were still in the school. Transfers, dropouts, and temporary absences reduced the group greatly so that the final Control II Group contained 44 children--26 boys and 18 girls. Somewhat more children were actually tested, but only 44 took all four sub-tests. Lateness was the cause of several children missing part of the test and administrative problems precluded filling in the missing parts.

Because only four sub-tests were given, the mean of the standard scores on these four sub-tests was obtained for each child in the final Project, Control, and Control II Groups, to serve as a comparable measure of general achievement. The statistical data on the three groups are presented in Table 8.21.

It is quite evident that on the first testing the three groups were very similar, with mean standard scores of 44.36, 44.82, and 44.31. On the retest, however, the Control II Group showed a mean gain of only 6.05 points, while both groups in the Project school surpassed the Control II Group by more than 4 standard score points, a statistically significant difference corresponding to nearly a year in grade score. The results are essentially the same when boys and girls are considered separately (see Tables 8.22, 8.23).

The explanation of this large difference between the Control II Group and both groups in the Project school is not completely clear. Each of the major factors that may have had a bearing on the results needs to be considered. First, the Control II Group was sufficiently like the Project and Control I Groups as to make it unlikely that the difference in gains is at all attributable to differences in initial achievement. Secondly, we do not have intelligence test scores for the Control II Group; by the time we were ready to record them, the use of group IQ tests had been proscribed in the New York City schools. However, in view of the equivalence in initial achievement, any large difference in initial mean IQ seems unlikely. Thirdly, the staff which administered the test thought that the children in Control II Group were more amenable to the test situation than the children in the Project school. Fourthly, although central Harlem, where the Control II school is located, and South Jamaica, where the Project school is located, are both populated almost exclusively by Negroes and are substantially disadvantaged, we do not know if the sociological factors bearing upon school learning are equivalent in the two environments.

With due consideration to the above points, it is still hard to avoid the conclusion that at least part of the difference in achievement gain between the two Control Groups was probably due to the stimulating effect of the presence of the Project in the Project school. That the Project teachers exerted a great deal of effort was part of the Project plan. It also seems likely that the teachers of the Control children in the Project school exerted more effort than they might have in the absence of the Project, especially during the first year, when the largest gains were made. In other words, it seems probable that a Hawthorne effect was present in the Project school, affecting both Project and Control classes, particularly in the first year.

It follows, then, that the achievement gains of the Project Group would probably have shown up in a still more favorable light if the comparison had been made only with a control group outside the Project school.

Achievement Gains by IQ Levels

The changes in median grade score have been analyzed for the three IQ levels (below 85, 85 to 94, 95 and up) for boys and girls. The results are presented in detail in Tables 8.24 and 8.35. The means and standard deviations are presented in Tables 8.24 to 8.29. A better understanding can be obtained from consideration of the gains which are presented in Tables 8.30 to 8.35.

In general, the average gain in achievement for a group was related to the group's initial ability. The "low" IQ groups gained the least (1.18 years to 1.33 years), the "middle" IQ groups gained more (1.62 years to 2.18 years), and the "high" IQ groups gained most (2.23 years to 2.69 years).

In the "low" IQ groups, both the Project and Control Boys did best the first year and relatively less well the second and third years, though a slight improvement was seen in ninth grade as compared to eighth grade. Total gain between the Project and Control Boys was almost identical. The low IQ Project Girls and Control Girls achieved almost identical results, gaining approximately a half year in the first year, a quarter of a year in the second year, and a half year in the third year; none of the small differences is significant.

In the "middle" IQ groups, the Project Boys made significantly greater progress in the first and third years, but made practically no gain in the second year. Consequently, their slightly greater total gain does not reach significance. The Project Girls made a significantly greater gain than Control Girls in the third year, but on the three-year change their superiority fell just short of reaching a significant level.

In the "high" IQ groups, the Control Boys gained more than the Project Boys in the first two years and the groups gained equally in the third year, giving a probably significant advantage to the Control Boys. The Project Girls and Control Girls did equally well in total gain, despite a poor third year gain for Project Girls.

In summarizing the preceding material, three findings stand out. The first is that total gain is related positively to IQ: the initially brightest tended to make the largest largest achievement gains. The second is that most of the Project sub-groups did most poorly during the second year and improved during the third year, surpassing the Control sub-groups in the third year. The final point is that the first year showed the greatest gains in nearly all sub-groups.

Gains in the Sub-Tests

As we have already seen, the total gain for the three years was approximately equal in the Project and Control Groups for median achievement on the entire Metropolitan battery. This does not necessarily mean that similar equality of progress took place in all areas tested.

The data on sub-test achievement are presented in Tables 8.36 to 8.47. These present the data separately for boys and girls, and give the mean standard scores and standard deviations, grade scores, and gains for each of the groups. Since at the first testing the Project Boys were substantially higher than the Control Boys, and the Control Girls were substantially higher than the Project Girls, the most meaningful comparisons are those of the gains in grade score.

The gains for Project Boys and Control Boys are shown in Tables 8.40 and 8.41. There is considerable variation in the size of gains, and the patterns are quite similar. Both groups made their smallest gains in Spelling, Language, and the two Arithmetic tests. The Project Boys made greater gains in Reading, Spelling, Arithmetic Problems, Social Studies Information, and Science; the Control Boys gained more in Language Study Skills and Arithmetic Computation; but most of the differences are small and of doubtful significance. The Project Boys' best gain, 3.2 years in Social Studies Information, was the largest by a wide margin.

The gains for girls are shown in Tables 8.46 and 8.47. Both groups gained least in Arithmetic. Gains of less than 1.5 years were also made by Project Girls in Language and by Control Girls in Science. The only subject in which the Project Girls gained more was Science. It must be remembered that the Project Girls were significantly lower in IQ as a total group and that achievement gain was found to be related to IQ in the earlier analyses of achievement gains by IQ levels.

It is somewhat difficult to interpret the fluctuations from one year to another. The relatively slight gains made by the Project children during the second year show up in almost every sub-test, the major exception being Science. That year represented the low point of the Project in the morale of both teachers and pupils. However it was also a poor year for the Control children in several sub-tests. The Project staff's impression that the Project children showed greater seriousness and more work during the final year is corroborated in 14 of the 20 possible comparisons.

Discussion

In intelligence as measured by the WISC, the Project Group showed significantly greater gain than the Control Group. In achievement, the Project and Control Groups showed about equal gains, and both gained significantly more than the second Control Group. These findings warrant further discussion.

Importance of IQ gain. In the current literature on disadvantaged children, many writers have been emphasizing the importance of starting at an early age in attempting to overcome the shortcomings of home and neighborhood through superior schooling. Without denying that an early start is helpful, the present study has demonstrated that early adolescence is not too late to induce a favorable change in measured IQ. The Project children showed improvement, particularly in Verbal IQ, that is educationally as well as statistically significant. This was most striking in the Project Boys, one-third of whom showed Verbal IQ gains of 10 or more points.

In an exploratory study like this, it is impossible to draw clear cause-effect conclusions. It was hoped that the personal relationship developed between pupils and teachers during the three-year period would provide an atmosphere of trust in which intellectual growth could take place. Aspects of the Project situation which seem to have potential for intelligence gain are the prolonged contact with a small group of teachers, the stimulation and encouragement of oral discussion and verbal expression, the attempts to provide meaningful experiences as a basis for concept building, and the efforts to stress understanding and problem-solving rather than memorization. Whether any of these, or all of them in combination, were responsible for the IQ gains cannot be proven, but these are the features of the Project which the staff emphasized in the hope that intellectual growth would be fostered.

It is significant, too, that there was also a small but definite gain in the Control Group. While this may have been due to a practice effect, all or in part, it at least contradicts the idea of a necessarily falling IQ in such a population. As pointed out earlier, the Control Group did receive enough extra attention to produce some Hawthorne effect, which may account for the gain in IQ.

Why the boys tended to show more improvement in IQ than the girls is also worth some speculation. It may be that in the beginning these boys were more alienated from teachers than the girls were, so that the three-year effort to establish a meaningful relationship with them may have had more room for improvement with the boys. But in the absence of comparable longitudinal studies of WISC IQ changes in early adolescence, there is no way of being sure whether this sex difference in the Control Group points to a specific effect of the Project situation.

Achievement Gain

If the Project children showed a significant superiority in IQ growth, why didn't they show a similar superiority in achievement? This question is likely to have occurred to many readers already and certainly warrants discussion.

First one must not overlook the significant fact that both the Project and Control Groups in the experimental school made substantially greater gains than the

Control II Group. The latter group, although closely equated at the beginning, made only 60 per cent as much growth on the Metropolitan over the nearly three-year period. Achievement in the entire class at the Project school was significantly better than in the Control II school.

Secondly, one can speculate that some of the features of the Project may have inhibited superior achievement on the Metropolitan. The encouragement the teachers received from the College Committee to try many different ideas was stimulating for them and probably for the children; but it may have de-emphasized some of the content which is covered in these tests.

Meanwhile, the Control teachers as a group had the advantage of considerably more experience, both with the course of study and with the class management problems in this school. This is clearly shown in Table 8.47. They may have been motivated by the competitive situation, and as the comparison with the Control II Group showed, there seems to have been a substantial Hawthorne effect.

As we have noted earlier (see Table 8.47), the Control Group averaged 2.1 points higher in Full Scale IQ. Since there was also a tendency for those with higher IQ's to make greater achievement gains, this small difference nevertheless favored the Control Group a little.

The Project teachers were quite critical of the Metropolitan as a measure of what they had taught. They felt that much of the most meaningful content they had covered was not included in the items of this battery. For example, the English teacher had striven for greater freedom and creativeness in self-expression while the text measured spelling, usage, and grammar. On the other hand, tests based specifically on what had been stressed in the Project classes would not have been fair tests for the Control classes. A general achievement battery was necessary, but it should be recognized that this did not measure many specific instructional outcomes, in either Project or Control classes. It is probable that there was closer correspondence between Metropolitan content and the curriculum followed in the Control classes. Thus both the somewhat disappointing total gain and the absence of significant achievement differences between Project and Control groups may be, at least in part, due to inadequacies in the measuring instrument used.

Finally, one may ask what is a reasonable expectancy for the work of a small group of beginning teachers? Should they be expected to surpass the results of a group of experienced teachers? Should their work be judged inadequate if they just equal the experienced group in achievement gain? It may well be argued that a procedure which results in equaling the achievement results of experienced teachers in their own school, and surpassing those in another school, should be evaluated favorably.

A Follow-Up Study

A further test of the effectiveness of the School Project could come from an examination of its long-term impact on the pupils who participated. Will the apparently improved intellectual functioning which the gains in IQ seemed to indicate be substantiated by better adjustment and greater achievement in later school and vocational experiences? Will the participants do better as they continue their education or seek jobs?

Unfortunately the original plans for the Project did not call for, and funds were not obtained for, a follow-up study. However, in view of the importance of this activity, the Office of Research and Evaluation of the Division of Teacher Education agreed to use some of its resources to conduct an inquiry. This effort will not only give the evaluation of the Project greater depth but will also carry the added advantage of having a research team which has had no connection with the original evaluation make a fresh and disinterested examination of the results.

The specific hypotheses to be tested in this high school follow-up study are:

1. The Project children will be more likely than the Control children to begin high school in the fall of 1964 and to complete the academic year 1964-65.

2. The Project children will be more successful in high school than the Control children as measured by passing marks in school subjects.
3. The Project children will make better adjustments in high school as indicated by stated satisfaction with their high school experience, by more satisfactory behavior records, and by participation in the extra-curricular life of the school.
4. Those children within the Project group who made the greater gains in IQ as measured by the WISC will make the greater relative gains in academic achievement.
5. The post-evaluation of junior high school experience will reveal greater satisfaction with that experience among the Project children than among the Control children.

Work has already begun. The study will seek comparative data for the experimental and Control Group youngsters relating to: (1) enrollment in high school, (2) curriculum pursued, (3) academic records, (4) behavior records, (5) attendance records, and (6) drop-out information and work histories. In addition the staff plans to gather data through individual interviews with the 130 youngsters who participated in the Project either as members of the Project Group or the Control Group to ascertain (1) satisfaction with school work, (2) perceptions of academic performance, (3) reasons for dropping out of school, (4) satisfaction with work experience (dropouts), (5) plans or aspirations for the future, and (6) evaluation of their junior high school experiences.

This report will be issued as a supplement to the Final Report in the Fall of 1965.

Chapter 9

Abilities and Characteristics of The Children as Revealed by Tests

The opportunity to test the entire seventh grade population in the Project school made it possible to collect data about young Negro adolescents, data that are in many respects unique. The present chapter attempts to present this information so as to give a picture of the group as a whole, without reference to the separation between Project and Control Groups.

Intelligence

Individual Differences on the WISC

The results on the WISC for the total seventh grade population of 196 children tested in 1961 are shown in Table 9.1.* In the three IQ's--Verbal, Performance, and Full Scale--the children's means were close to 90, which corresponds to a percentile rank of 25 in the original normative population. The ranges were somewhat restricted, with no scores in the very superior or severely retarded categories, and with standard deviations smaller than the standard deviation of the normative population, which was set by Wechsler at 15 points.

The IQ distributions are presented graphically in Figs. 1-3. The three distributions are all approximately symmetrical and resemble the expected bell-shaped curve, but there is a slight skewing of the Full Scale IQ's, and in general there are fewer extreme scores than would be expected in a normal distribution.

From a teaching standpoint, however, the variations were quite large enough to create problems. Nearly one-fifth of the total group had Full Scale IQ's below 80, which is the lower end of the "dull normal" range. The eight children with IQ's below 70, as well as the 22 with IQ's between 70 and 74, fell within the official range for placement in classes for Children with Retarded Mental Development. On the other hand, a few scored in the "bright" range, and about 40 percent fell within the "normal" range of 90 to 109.

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*This does not include the children who had been assigned to the school's C.R.M.D. class on the basis of earlier testing by the Bureau of Child Guidance.

The subtests of the WISC provide raw scores which are translated into standard scores. For computational purposes, we have used the raw scores. For interpretation, however, the standard scores are more meaningful, since all standard scores set 10 as the mean score of the normative population of similar age.

The mean standard scores of our population on the sub-tests are shown in Table 9.1. They range from a high of 9.23 in Picture Completion to a low of 7.51 in Vocabulary. The group was lowest in Vocabulary and Information, two tests which are closely related to educational experience and cultural advantage. They did comparatively well on Comprehension, Digit Span, Picture Completion, and Picture Arrangement, showing normal understanding of practical life situations depicted verbally or pictorially, and adequate rote memory. They did less well on Similarities, Block Design, and Object Assembly, showing difficulty in coping with abstract relationships, whether verbal or non-verbal. Arithmetic and Coding were of medium difficulty for the group. The pattern of higher and lower scores shows a limited range of information and vocabulary, and greater competence in dealing with specific practical situations than in dealing with abstract material.

It is noteworthy that this educationally retarded group did hardly any better in Performance IQ than in Verbal IQ. In some individual cases there were marked differences between Verbal and Performance. There were seven children with Verbal IQ 20 or more points higher than Performance IQ, and eight children with Performance IQ 20 or more points higher than Verbal IQ. The majority, however, did about equally well on the two parts.

It might be thought that an educationally disadvantaged group should be able to perform better on a non-language group of tests such as the Performance part of the WISC than on the Verbal part, in which the relevance of school learning is obvious. But this assumes that they have had more adequate opportunities for sharpening visual perception

Figure 1 WISC Verbal Scale IQ Distribution

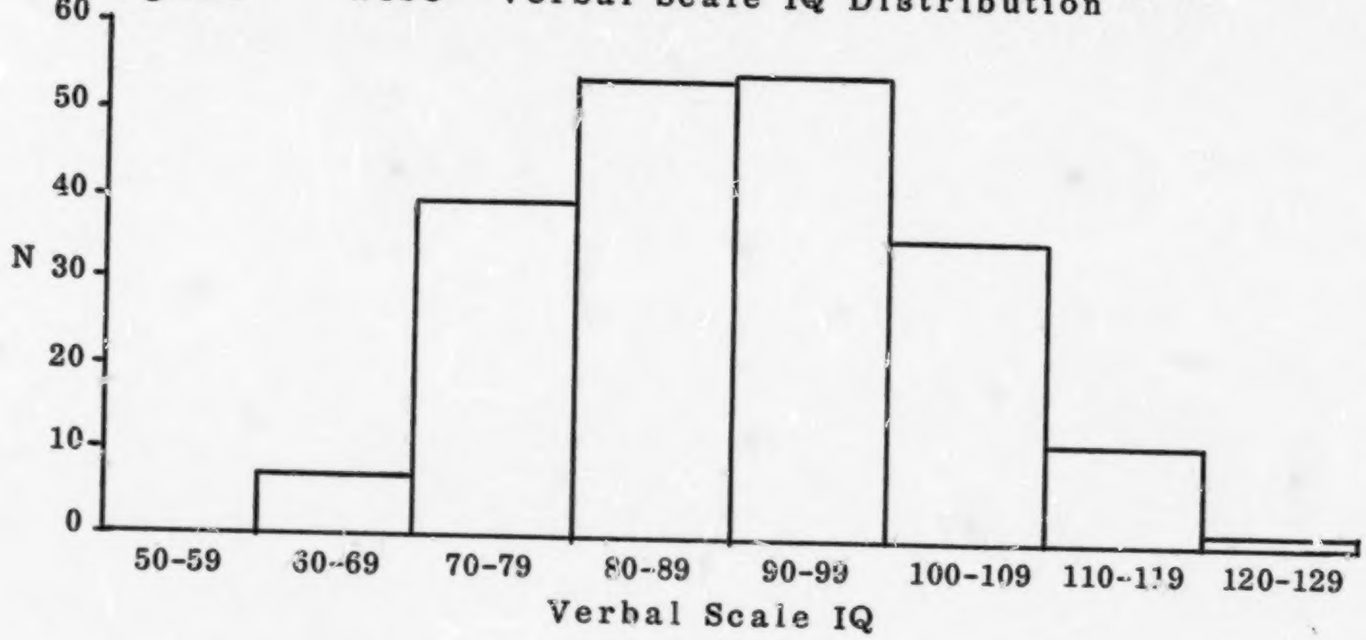


Figure 2 WISC Performance Scale IQ Distribution

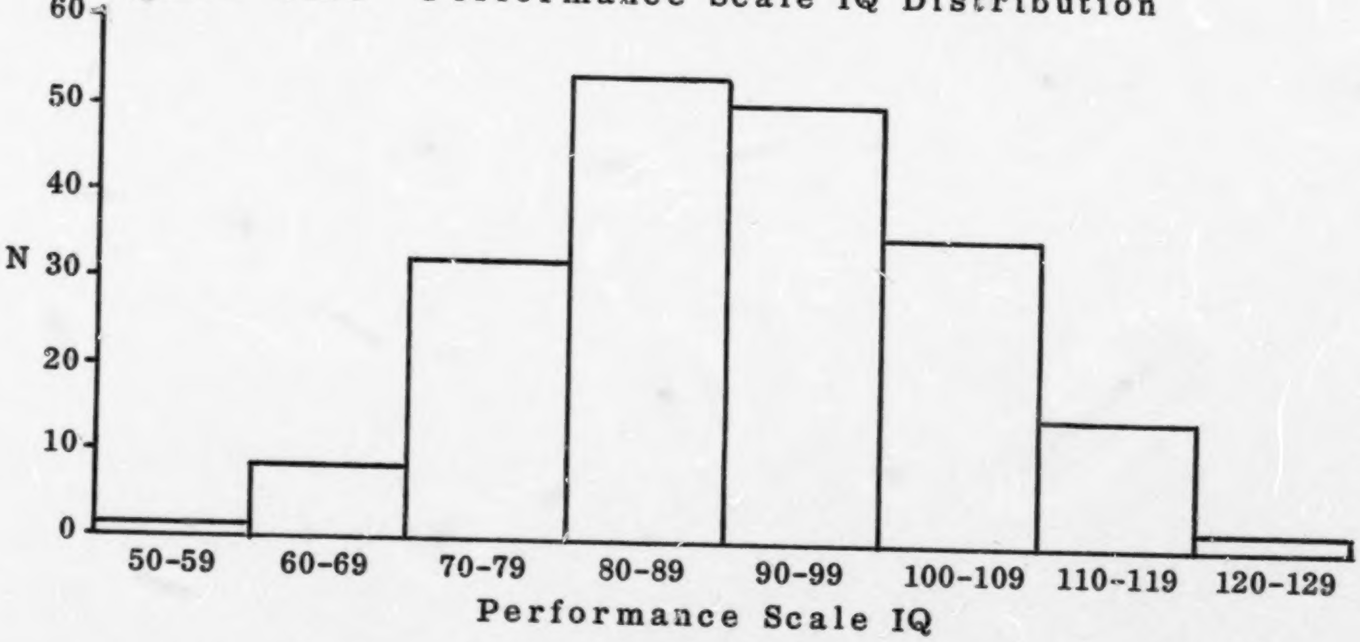
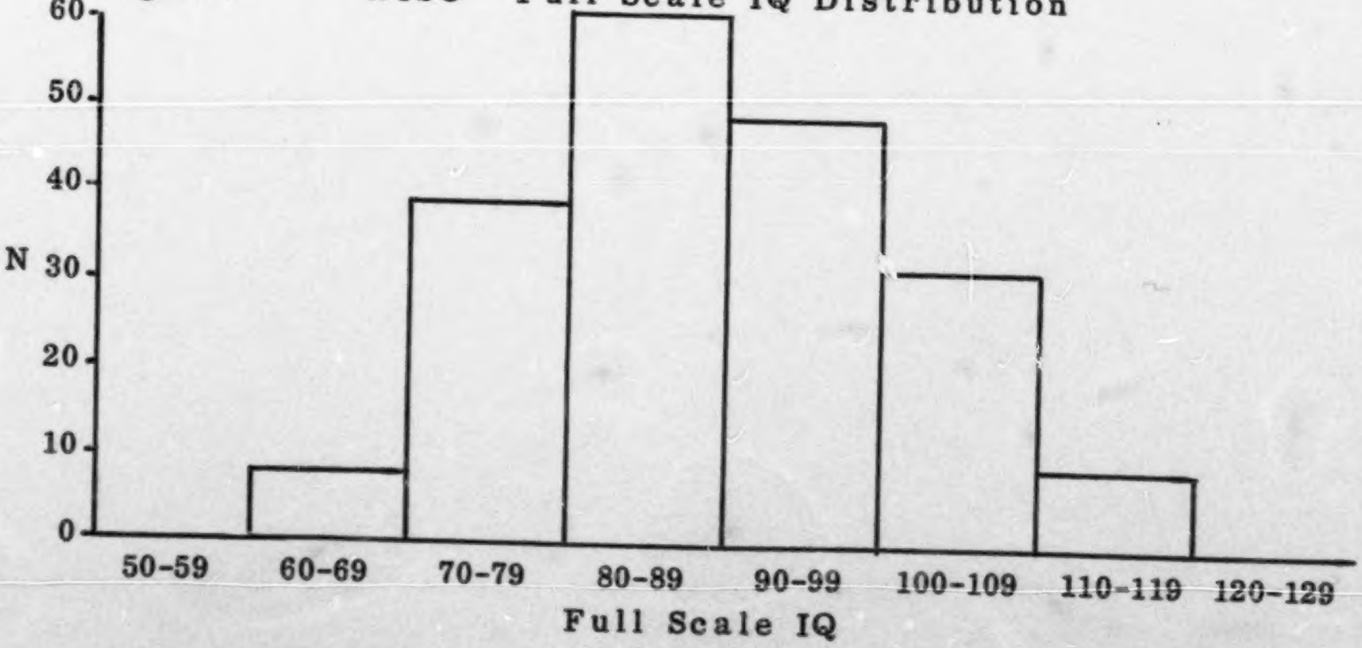


Figure 3 WISC Full Scale IQ Distribution



and developing puzzle-solving abilities involving manipulative materials than they have had with verbal skills. There is no evidence that this is a correct assumption. Indeed, it is quite probably that many of them have had very little experience with the kinds of toys--blocks, jig saw puzzles, construction toys, etc.--that might provide background useful in taking the Performance sub-tests. They may very well be as lacking in preparatory experience for non-language intellectual skills as for verbal skills.

Comparative Ratings on Various Intelligence Tests

When these children were attending elementary and junior high schools, New York City regularly gave group intelligence tests city-wide in the first, third, sixth, and eighth grades. It was the apparent drop in IQ revealed by those surveys that was one of the stimuli for this Project.

The Pintner-Cunningham Primary Test was given in the first grade. It is a group test intended for use in kindergarten and first and second grades. It contains seven sub-tests, five of which use pictures and two, geometrical designs. It requires no reading, but does require ability to comprehend and carry out oral directions.

The Otis Quick-Scoring Mental Ability Tests: Alpha, Short Form is a non-reading group test intended to be used from the end of the first grade through fourth grade; it was used city-wide in the third grade. It contains 45 pictorial and geometric items which are used twice, once with specific oral directions for each item, and once with the general instructions to mark the one item not like the other three. No reading is involved.

The Otis Quick-Scoring, Beta is intended for use in grades 4-9. New York City used it city-wide in the sixth grade. It contains 80 items of various kinds, all of which require reading.

The Pintner General Ability Tests, Verbal Series, Intermediate Test is a group test with eight sub-tests, all but one of which require reading. It was used as a city-wide test in the eighth grade.

The Cattell Culture-Fair Intelligence Test, Scale 2 (formerly called "Culture Free") is intended for use at ages 8-14 years and with average unselected adults. It contains two parts, each with four sub-tests (Series, Classifications, Matrices, and Conditions) none of which require reading. It is intended to provide a measure of general intelligence (Spearman's "g") free of "contamination by specific cultural learning effects over a wide range of cultural and social differences. (6) The Cattell was selected as the one group intelligence test to be used in the present study on the basis of evidence that it is at least as free from the influence of cultural factors as other non-reading group tests, and seems to have been used in more cross-cultural studies than any other group test suitable in difficulty for the Project population.

Data on intelligence tests given in the elementary school were copied from the permanent record cards. The Pintner IQ's were obtained from the city-wide (machine-scored) administration in January 1963. The Cattell was administered by the Project psychologist to the Project and Control Groups in March 1963.

A search of the records revealed that 79 of the 196 children had complete intelligence test records including all of the above tests. The results for these children are shown in Tables 9.2 and 9.3.

One of the original purposes of this Project was to check on the belief by some school officials in New York City that the IQ's of disadvantaged Negro children show a marked drop, amounting to close to 20 points, between the first grade and the seventh grade. The means on the various mental ability tests are shown in Table 9.2. In seventh grade the mean WISC IQ of the 79 children was 92.97, higher than the mean of 89.0 for the total original group of 196, but not significantly different from the seventh grade WISC IQ's of the final Project population (see Tables 9.7 and 9.10). These 79 children achieved mean IQ's of 97.62 on the Pintner-Cunningham, 93.80 on the Otis Alpha, 88.15 on the Otis Beta, 91.17 on the Pintner Intermediate, and 96.29 on the Cattell. The total change in scores from the first grade test to the sixth grade Otis Beta (on which the pupils scored lowest) is a drop of 9.47 points; not as severe as was expected, but still substantial and significant. The fact that all of the tests given in junior high school gave higher mean IQ's than the Otis Beta, ranging from 91 to 96, suggests that the apparent drop of over 9 points from first grade to sixth grade is at least partially due to the nature of the Otis Beta test.

The standard deviations, also shown in Table 9.2, show some differences in the spread of scores on the various tests. The greatest variability was on the Pintner and the Cattell; the least, on the Otis Beta. So the Otis Beta not only had the lowest mean, but also (because of its low spread) had fewest IQ's of 90 and above.

The correlations of the five group tests with the WISC and with Metropolitan Reading are shown in Table 9.3. The two tests given in the eighth grade (Cattell and Pintner) had high correlations with the WISC Full Scale IQ's, .72 and .80. The sixth grade Otis Beta and third grade Otis Alpha had equal correlations with the WISC; it is quite remarkable that the Alpha, given four years before the WISC, correlated as well with the WISC as did the Beta, given less than a year before. Even the Pintner-Cunningham, given in first grade, had a substantial correlation of .56 with the WISC, given six years later.

The correlations of the six IQ tests with the beginning seventh grade Metropolitan Reading scores are also shown in Table 9.3. It is important to note that a substantial correlation between a measure of intelligence and a measure of reading is expected and considered desirable. However, when this correlation becomes so high that it approaches the size of the usual correlations among reading tests (around .85) it raises the suspicion that the IQ test is not measuring anything very different from what the reading test is measuring. The Metropolitan Reading test is a measure of silent reading comprehension of a series of independent paragraphs which increase steadily and rather steeply in difficulty. It is often thought of as a measure of "reasoning while reading."

There were three IQ tests which had high correlations with reading. Two of these (Otis Beta and Pintner) are tests in which the questions have to be read before they can be answered. They also correlated more highly with reading than with other intelligence tests; these must be considered to have very high commonality with the reading test. The other (the WISC Full Scale) not only involves no reading, but also includes five non-verbal sub-tests. The fact that it correlates so highly with reading (.76) indicates that at this grade level reading ability as measured by the Metropolitan and intelligence as measured by the WISC have much in common.

The Cattell's correlation of .52 with reading is of moderate size, and strikingly lower than that of the WISC. Indeed, it is no higher than that of the Otis Alpha, given over three years before the reading test. This suggests that the Cattell is not only less loaded with educational and cultural factors than the WISC and Otis Alpha, but is also less useful for the prediction of educational performance. This is not to imply that it does not have other uses.

The Pintner-Cunningham's r of .46 with reading is the lowest, but this was to be expected for any test given six years earlier. This correlation is similar to many of the correlations that have been found between first grade reading readiness tests, IQ tests, and reading attainment at the end of the first grade. That this test retains some predictability over a six year period indicates that it is a useful test with this kind of population.

The Otis Alpha, used in the third grade, also shows up well. It is more closely related to other measures of intelligence than to reading; shows a quite substantial relationship to the WISC IQ's obtained three to four years later; and is as closely related to seventh grade reading as the Cattell, given in eighth grade. It would seem to have some usefulness with a population like this.

In addition to the above analysis, which was done on the 79 cases for which results were available on all six IQ tests, another analysis was made which included all 113 cases for which complete results were available on the Otis Beta, Pintner, Cattell, and WISC. These results are shown in Table 9.4. This table includes 34 additional children for whom either the Pintner-Cunningham or Otis Alpha (or both) was missing and is, therefore, more representative of the total beginning population. It also includes the WISC Verbal and Performance IQ's.

The means and standard deviations for the IQ tests are very much like those in Table 9.2, running approximately one point lower. Again the Otis Beta is lowest by a wide margin--five points below the WISC Full Scale, and nearly nine points below the Cattell.

The Pintner is next lowest, but only one and a half points below the WISC Full Scale. The WISC Verbal and Performance IQ's run a little higher, 92.28 and 93.20.* The Cattell is the highest, with a mean IQ of 95.57. In terms of variability, the standard deviations of the Cattell and Pintner are high and approximately equal, and the others run three to four points lower.

The inter-correlations shown in Table 9.4 are very little different from those in Table 9.3, except that Verbal and Performance IQ's have been added and correlations among the IQ measures are shown. The WISC Full Scale IQ shows up very well. It has high correlations both with reading and with non-verbal measures. The WISC Verbal IQ does almost as well, but has a slightly higher correlation with reading and substantially lower correlations with non-verbal tests. The Pintner correlates slightly more highly with reading than with the other IQ measures, indicating again that it is more loaded with achievement than most of the other tests. The Otis Beta similarly has a higher correlation with reading than with the WISC or Cattell. The high correlation of Otis Beta with the Pintner shows that these two tests have much in common.

The two non-verbal IQ measures (Cattell and WISC Performance) show very similar patterns. They both correlate more highly with WISC Full Scale than with each other. The Cattell shows up particularly well. Its highest correlation is with WISC Full Scale, indicating that both are measuring substantially the same underlying general ability. It correlates as highly with the WISC Verbal IQ as with the Performance IQ. Finally, its correlation with reading is slightly higher than that of the Performance IQ.

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*The Full Scale IQ's are not obtained by averaging the Verbal and Performance IQ's. The scores on all sub-tests were totaled and the standard deviation of the resulting scores was set to equal 15 points of IQ. Thus for a child with below average and nearly equal Verbal and Performance IQ's, the Full Scale IQ will be lower than either; a child high on both (above 100) tends to get a Full Scale IQ higher than either. When there is a substantial difference between a child's Verbal and Performance IQ's, his Full Scale IQ falls somewhere between them.

It should be noted, also, that the mean IQ on the Cattell is approximately equal to the mean Full Scale IQ of the Project Group on the ninth grade WISC retest (boys, 98.3; girls, 90.79; see Tables 8.9, 8.10). This suggests that the Cattell, administered when the Project was a little more than half completed, may have benefited from the operation of those features of this project which were responsible for the increases in WISC IQ's. On the other hand the IQ's on this test might have been just as high if it had been administered near the beginning of the Project.

Prediction of Growth in Achievement

Is growth in achievement predictable? We have already seen that there are substantial to high relationships between various measures of intelligence and reading achievement at the beginning of the seventh grade. Reading, we also know, is very highly correlated with median achievement. The gains in achievement which our group made over the three-year period were quite variable. Some of them made marked gains, others made moderate gains, while a small number showed very little gain. Could these varying gains have been predicted with better than chance success?

Measures of intelligence as predictors of gain. Table 9.5 shows the correlations of eight measures of mental ability with the gain in Metropolitan Median Grade Score from the first testing in October 1961, to the final testing in May 1964. None of the correlations is really high. However, the WISC Verbal and Full-Scale IQ's correlate .48 with total gain. This is a correlation of moderate size, showing a general trend for the brighter children to make larger gains, but with a substantial number of exceptions to the general trend. The Performance IQ has a lower correlation with gain and does not improve the prediction when added to the Verbal. None of the group tests given in the elementary school had a correlation with these same gains that was high enough to be useful. The Cattell Culture-Fair Test given in the eighth grade had a correlation of .49 with these gains, but it must be remembered that this test was administered approximately half way through the Project and therefore is not really a pre-test like the others.

The same comment applies to the Pintner General Ability, also administered in the eighth grade. Of the two group tests given in the eighth grade, the Cattell, although non-verbal in character, predicted gain in academic achievement better than the Pintner, which is a highly verbal test.

The correlations of the eleven parts of the WISC with gain are shown in Table 9.6. It may be noted that the two sub-tests having the highest correlations with gain were Vocabulary and Information, which were the sub-tests considered to be most highly loaded with cultural factors and also were the sub-tests on which this group had the greatest difficulty (see Table 9.1). Apparently by the time disadvantaged children are in junior high school, their previous lack of success in learning the language and acquiring information, certainly caused to some extent by their disadvantages, is significant as an indicator of future achievement in academic work. The Vocabulary sub-test correlates only slightly less well with gain than the entire WISC battery.

Initial achievement as a predictor of gain. We have already seen that there is some correlation between initial standing in intelligence and gain during the Project. Is there a corresponding relationship between initial achievement and progress? The answer to this question is shown in Table 9.7. Here, the correlation with total three-year gain is shown for each of the ten sub-tests of the Metropolitan and also for the Median Grade Score at the time of the first testing. Surprisingly, the Median Grade Score did not do as well in predicting gain as the arithmetic tests taken by themselves. The Reading test did not do as well as the two Arithmetic tests although it did do as well as the Median Score. Of all of the sub-tests, the lowest correlation was obtained for Spelling.

When one compares the Metropolitan to the WISC, it is apparent that initial achievement showed somewhat lower correlations with gain than initial mental ability, although the Arithmetic Problem-Solving Concepts sub-tests of the Metropolitan were an exception, doing practically as well as the WISC. This test, which stresses reasoning, may also be to some extent a measure of mental ability.

In view of the fact that the different sub-tests contributed unequally to the total scores, an effort was made to see whether by using only the best sub-tests and combining them according to multiple correlation, which assigns each test a weight in accordance to its special contribution, these predictive correlations could be substantially increased. The results are shown in Table 9.8. The use of the best three sub-tests improved the correlation for both the WISC and the Metropolitan. However, the WISC remained ahead of the Metropolitan, whether one looked at the result for the total population, for boys only, or for girls only. Whether in repetition one would really obtain correlations as high as this with another comparable group of students would need to be verified. It would seem, however, that properly selecting tests which individually have fairly substantial correlations with achievement gain and combining them according to the best available statistical procedures can substantially improve the correlations obtainable from total scores on large batteries of tests.

Factor Analysis of the WISC

One of the questions that it was expected that the psychological studies would explore involved the pattern of abilities that the sample population displayed. The Wechsler Intelligence Scale for Children, in common with the Stanford-Binet in its various revisions, was standardized on a population composed of white children. It has often been claimed that these tests (among others) are inappropriate for subjects with different cultural backgrounds, and that such subjects might be expected to demonstrate different ability and achievement patterns. This study offered an opportunity to test these statements, at least in part. It has already been shown that the ability level of the sample is below that of national samples.

The results of the factor analysis of the WISC may be summarized non-technically as follows:

1. The factors that appear in the WISC seem to be essentially the same as those obtained from the original standardization population.
2. While the factors are apparently the same, there was a definite correlation between verbal and perceptual abilities in the standardization population which is not present to any substantial degree in the present study.

3. There seems to be a "verbal-educational" factor which is present in most of the WISC sub-tests, the exceptions being four Performance sub-tests.

4. The "verbal-educational" factor can be further separated into a "verbal" factor and a "number" factor; these are, however, substantially interrelated.

5. There is a "perceptual organization" factor found in four Performance sub-tests, which seems to be relatively independent of the rest of the WISC.

One may conclude, then, that the basic factors underlying intellectual functioning are similar in the Project population and the original standardization population (containing a cross-section of white children), but the relationships among the factors are somewhat different. In the Project group, perceptual organization seems less closely related to school achievement than in the standardization population.

Tables 9.9, 9.10, and 9.11 present the intercorrelations, the unrotated factor matrix, and the obliquely rotated factor matrix for 11 sub-tests on the initial WISC testing. This is for the total initial population (N - 196). Wechsler (44) reports three tables of intercorrelations among the various sub-tests of the WISC at ages 7-6, 10-6, and 13-6. The mean age of the present sample was 12-10, so the nearest age group is the 13-6 age group. But while the sample used in the standardization of the WISC was within one and one-half months of the mid-year age (1949, p.7) at each year level, this was not the case with the Project sample, whose age at the time of testing ranged from 11-6 to 16-2. Comparison of Table 9.9 with the most nearly equal age group reported by Wechsler (13-6) indicates that the intercorrelations within the Project sample form approximately the same pattern as in the normative population, though they are lower in all but three instances.

There are positive correlations among all eleven sub-tests. There are substantial correlations among the verbal sub-tests (except Digit Span) and substantial correlations among the performance sub-tests (except Coding), but correlations between verbal and performance sub-tests are generally low.

The unrotated factor matrix is shown in Table 9.10. The rotated factor matrix (Oblimax) in Table 9.11 yields three factors. For the purposes of this discussion, loadings below .20 will not be considered significant. Factor I, with substantial loadings on the first five sub-tests, appears to be a Verbal factor. Factor II, with significant loadings on Picture Completion, Picture Arrangement, Block Design, and Object Assembly, forms a Perceptual Organization Factor. The third factor, with loadings on Arithmetic, Digit Span, and Coding, is similar to Cohen's (7) Freedom From Distractibility Factor, though as will be seen subsequently, this interpretation may require modification.

How do these findings compare with those already reported? Cohen (7) reported factor analyses of the WISC at ages 7-6, 10-6, and 13-6, using the original standardization sample. He identified five factors and considered loadings of .20 and above to be meaningful. For the oldest age group, he found two Verbal Comprehension Factors. The first--Factor A, containing the Information, Comprehension, Similarities, and Vocabulary sub-tests--had loadings ranging from .26 to .47, and appeared to reflect formal learning. The second factor--Factor D, containing the Comprehension, Similarities, and Picture Completion sub-tests--had loadings ranging from .20 to .27 and seemed to Cohen to apply to verbal skills in new situations. The two factors were closely related at the lower age levels (r's of .78 and .82) though less so at the higher age level (r=.43). What Cohen found as two factors is represented within Factor I in our sample. Whether this represents a real difference or is an artifact of the factor analytic procedure cannot be answered here. Cohen's Factor B, which he names Perceptual Organization, contained Picture Completion, Block Design, and Object Assembly with loadings of .46 or higher. Factor II in our study contains these three sub-tests but also includes Picture Arrangement. Both analyses have revealed essentially the same factor. Cohen also found a Factor C, similar to Factor III here, which had significant loadings in Arithmetic, Digit Span and Mazes sub-tests. We did not give the Mazes sub-test, but otherwise our Factor III seemed to be the same as his Factor C. Interpreting Factor C as an attention factor, Cohen labeled it

Freedom from Distractibility. There may be some clinical justification for this nomenclature. A combined factor analysis of the WISC and the Metropolitan Achievement Test, reported more fully below, suggest that Factor III may relate to number ability rather than to attention.

Finally, Cohen's fifth factor, Factor E, which showed loadings on Picture Arrangement and Coding, he called a quasi-specific factor and declined to interpret. Our results did not warrant going beyond three factors.

Factor Analysis of the Metropolitan Achievement Test

A factor analysis was also carried out for the results of the first administration of the Metropolitan. Briefly and non-technically, the results show a "general achievement" factor which accounts for over 90 percent of the common variance. In addition, three specific factors are discernible, one for verbal comprehension, one for arithmetic, and one for vocabulary.

The intercorrelations of the Metropolitan sub-tests are shown in Table 9.12, and range from moderate to quite high. Table 9.13 presents the unrotated factor matrix. The first factor has high loadings on all of the tests. This indicates that for this group of pupils achievement tends to be generally good or generally poor; the child who does very well in one subject and poorly in others is a rare exception.

The specific factors within the Metropolitan show up more clearly in the oblique rotation, shown in Table 9.14. Factor A, with highest loadings in Reading, Science, and Social Studies Information, seems to be either a reading skills factor or a verbal comprehension factor. Factor B has its highest loadings in the two arithmetic tests. Factor C has its main loadings in Vocabulary and Spelling and seems to be a vocabulary factor. However, it must be emphasized that the commonalities are high and the intercorrelations among factors are substantial, so that the overwhelming size of the general achievement factor must not be forgotten.

Factor Analysis of WISC and Metropolitan Combined

Is there a genuine difference between "intelligence" tests and "achievement" tests?

There have been some recent allegations that intelligence tests are just another form of achievement test. The fact that the WISC and Metropolitan were given to the total seventh grade population during the fall of 1961 provided an opportunity to explore this question.

The results may be summarized briefly as follows: There is a general learning or intelligence factor which is found in both the WISC and Metropolitan. Each of these tests has two or more specific factors which are not found to any substantial extent in the other. This evidence would not justify replacing either of these tests by the other. There is a genuine difference between the two tests.

The correlation between the 11 WISC sub-tests and the 10 Metropolitan sub-tests are shown in Table 9.15. Except for Digit Span, the verbal sub-tests of the WISC tend to have substantial correlation with the Metropolitan sub-tests. The Performance tests, on the other hand, tend to have low correlation with the achievement sub-tests, many of them not significantly greater than zero. But correlations are not really high. The oral Vocabulary test of the WISC, for example, correlates .62 with Word Knowledge; a relationship that is substantial but far from perfect. The need for reading skill in the latter test and the difference between individual and group administration probably account for most of the discrepancies.

The unrotated factor matrix for the 21 sub-tests is shown in Table 9.16. There seems to be a general factor with substantial to high loadings in most of the sub-tests. This factor accounts for 76 percent of the common variance. Whether one should call it intelligence, or academic aptitude, or learning proficiency could be argued. But unquestionably the two test batteries do share a common factor.

Three other factors can be distinguished which bring the combination up to 59 percent of the total variance; beyond this one may doubt if the residuals are worth trying to analyze.

The nature of the four factors shows up somewhat more clearly in the oblique rotation, shown in Table 9.17. Factor I is concentrated in four WISC sub-tests, and seems to be the same Perceptual Organization factor found in the WISC analysis. Factor II is concentrated in the five verbal sub-tests of the WISC; this factor seems to be one of verbal comprehension. Factor III has its heaviest loadings in Science, Word Knowledge, Reading, Spelling, and Social Studies Information, and seems to be an academic learning factor. Factor IV has its heaviest loadings in the three arithmetic sub-tests and seems to be specific to mathematical skill. The intercorrelations show a high relationship between Factors III and IV, both of which are centered in the Metropolitan sub-tests; the other intercorrelations are low. It is surprising that the correlation is only .395 between Factor II and Factor III, which seem to be measuring different aspects of verbal comprehension and learning.

One may conclude that while there is a substantial correlation between the WISC and the Metropolitan, each is measuring certain specific factors which the other does not measure. It would not be justified, therefore, to substitute one of these tests for the other.

Personality Studies

One of the objectives of the research phase of the BRIDGE Project was to obtain information that would increase knowledge about the personality characteristics of the school population. There has been very little published research on the personality make-up of Negro youth in early adolescence as measured by psychological tests. Accordingly, a major part of the psychologist's time during the second year of the Project was spent in administering and scoring tests of personality. In addition, ratings were obtained from the teachers on two separate occasions, and school records were searched for data on such items as absences, changes of address, etc. The various measures obtained will be discussed below one by one, followed by an attempt to depict the characteristics common to the group, based on a synthesis of the data.

The Rating Scale for School Behavior

The Project teachers were asked to rate all of the children in the Project classes on a special rating scale of pupil characteristics which was devised for the purpose. This was modified from one previously used in studies of classroom groups at the City College

Educational Clinic. Each trait is rated on a 5-point scale, with 1 the lowest rating and 5 the highest. In seventh grade, the teachers were asked to compare each pupil with his fellow-pupils in the Project school, and the ratings were done near the end of school year. Near the end of the eighth grade, the teachers were asked to rate each of the Project pupils again, but this time they were to make the comparison between the pupil and the teacher's concept of what all other pupils in eighth grade in New York City were like.

Table 9.18 presents means and standard deviations for each of the rated items in both the seventh and eighth grades.

In seventh grade, when the pupils were compared with one another, the means were close to the mid-point of the scale on all items except the five ratings on the aspects of temperament on which the means were a little lower.

In the eighth grade, when the teachers were asked to make comparisons with their idea of the norm for the City as a whole, the means were consistently below the assumed mean of 3.0. The lowest ratings were in educational achievement, and the next lowest ratings were in temperament. The average ratings on school attitudes and behavior were a little higher, with comparatively high ratings in Interest in School Work and Freedom from Cheating, and a low rating in Ability to Formulate and Execute Plans. Social Behavior ratings were a bit higher yet, and ratings on Physical Characteristics were highest (2.9), approximating the theoretical means. The standard deviations were generally large and showed that the teachers made real differentiation among the pupils.

The Rosenzweig Picture-Frustration Test

During the second year of the Project, the Rosenzweig Picture-Frustration Test was administered to all members of the Project and Control classes available (N = 147). This test is a standardized measure of personality based on psychoanalytic theory. It permits interpretation of both qualitative and quantitative aspects of the responses.

The test consists of 24 cartoons in which a child or an adult is saying something to another child, who is blocked or frustrated in some way. This text is enclosed in a "balloon." The child is asked to respond with whatever answer he thinks the other child will give. Rosenzweig states, "It is assumed as a basis for the P-F Study that the subject unconsciously or consciously identifies himself with the frustrated individual in each picture situation...." (34) In a few instances, the English skills of the pupils were so limited that the items had to be read to them and their answers recorded for them on the answer sheet. The tests were scored according to the Manual. (34) The scoring was done by three graduate psychology students. They showed agreement among scorers of over 90 percent. When two of them disagreed, the third acted as arbiter.

Table 9.19 shows the means and standard deviations.

The scoring of this test is complicated and difficult to explain briefly. The analysis of an individual personality involves comparing the relative strength of factors and calls for a complicated pattern analysis. When one attempts to define the characteristics of a group, as in this instance, many individual characteristics cancel one another out. Nevertheless, there are interesting differences between the means of this population and those of the most nearly comparable group provided in published norms.

The reader will note that the first thirteen factors listed in Table 9.19 are scored in terms of percentages, while the remainder are in terms of number of scored responses.

The three main components in the scoring are the tendency of the subject to be Extrapunitive(E), in which aggressive responses are turned outward against the environment; Intropunitive (I), in which aggression is turned inward and directed toward oneself; Impunitive (M), in which aggression is evaded or glossed over.

Compared with the normative group, the present population is markedly and significantly more Extrapunitive, considerably less Intropunitive, and somewhat less Impunitive. This means that when they are frustrated they are more likely to hit out in an aggressive fashion than to blame themselves or to try to explain the situation away. Other differences indicate that as a group they are somewhat less likely to emphasize problem-solving in their responses, and their responses to frustration are not typically in conformity with conventional modes of expression.

The most striking conclusion one can draw from these results is that the total pattern of the present population more nearly approximates the normative pattern for the 8-year-old group than it does the normative group of 12 to 13-year-olds. Thus a very marked degree of emotional immaturity is suggested by the results of this test, present as a significant characteristic of the group. This immaturity is, of course, far more marked in some members of the group than in others, but for the group as a whole, it stands out as a very significant finding.

The Rorschach Ink Blot Test

The Rorschach was administered individually to the members of the Project group only. This projective test consists of ten cards, some with colored ink blots and some with black or grey ink blots of relatively non-specific shape. The examiner requests the subject to tell orally what the blot looks like or reminds him of. There is no limit to the number of responses that can be given and there are no "correct" answers, although a person's answers can be evaluated in a variety of ways. Among the characteristics to which attention is paid in the scoring are the area of location of the blot that is responded to, the relative importance of such factors as shape, color, shading, or apparent movement in the perception, and the kind of content, whether animal, human, plant, etc. Whether the response is a common or relatively rare one is also considered. Interpretation is a highly complex procedure, which takes into account the interrelationships among the scores as well as qualitative aspects of each response. Attempts to relate separate scores to specific traits or abilities have generally been unfruitful.

In the present study we have compared the scores obtained from the Project group with normative data. The best available normative group seems to be the one reported by Ames et al., (1) consisting of a white upper middle-class sample of 13 and 14-year-old boys and girls with a mean IQ of 116. Obviously the two groups are quite dissimilar in background although roughly of the same age. A second complication was the fact that the present study followed the Klopfer system of scoring, (18) which is a little different from the one used by Ames.

The results of this comparison may be summarized briefly as follows. Compared with a group coming from a favored socio-economic class whose mean intelligence was considerably higher, the Project group emerges as being less productive, less controlled, less constricted, less mature, more impulsive, emotionally more responsive to social stimulation and also more sensitive to nuances of interpersonal relationship. Their ability to see the world as do most others does not seem notably different on the average from the normative group. Nor do they appear, as a group, inclined toward markedly greater stereotype of perception. We have no basis for judging to what extent the Project group's Rorschach results would compare with those of a white population of similar intellectual level. Most of the differences noted could be explainable purely in terms of the average difference of at least 20 points in mean IQ's of the groups; the mean IQ of the Ames group was about equal to the highest IQ's in the Project group.

For those readers who may be interested in the details, the Rorschach findings in the Project group and those of the normative group are presented in Table 9.20.

In general, the Project group is considerably less productive, giving only about two-thirds as many responses. Time for response is not directly comparable. Pure Form (F %), in which no other determinant than shape determines the perception, is usually considered a measure of the degree of intellectual control over emotions. This is lower in the Project group by about 10 percent, and the accuracy of form perception is also lower in the Project group. These results suggest less constriction of personality on one hand and poorer intellectual control on the other.

The various other determinants show some interesting differences. The mean difference in total number of responses needs to be taken into account. With regard to the perception of movement, the Project group tends to make slightly less use of human movement and more use of animal movement. Human movement is generally considered to be related to inner creativity, self-acceptance, and fantasy life. Animal movement is thought to relate to the expression of natural drives and impulsiveness, and tends to decrease in use as individuals get older. The comparison of the two groups suggests that the Project group both has a less developed inner fantasy life and is also somewhat more impulsive and immature.

It is difficult to compare responses to the shading characteristics of the blots, because of slight differences in the two scoring systems. Taking these scoring differences into account, the Project group gave a slightly higher number of shading responses of the various kinds than did the normative group, suggesting greater emotional sensitivity and concern with adaptation to others and to the environment.

Color responses are generally thought to represent emotional responsiveness. The three sub-divisions of color response, reflecting differences in the degree of intellectual control, are similar in frequency in the two groups, though when the total number of responses are considered, the Project group displayed relatively more responsiveness to color in general.

The ability to see the world as others do is considered an important balancing factor in personality, and is represented in general by the Popular score. Allowing for the differences in total number of responses and slight differences in the reference list of Populars used in the two scoring systems, the Project groups gave nearly as many Populars in proportion to opportunities as the normative group did. They tended to see a slightly higher percentage of animal responses, which is supposed to reflect some stereotyping of perception, but the difference here is not great.

Location scores reveal very little difference in the proportion of responses to the whole as compared to responses to details. In both groups there is a fairly similar balance. The quality of the whole responses, however, may have been different in the two groups and this cannot be checked.

In sum, the Project group differs from the normative group, showing itself as somewhat less mature, less controlled, and less accurate intellectually, while it is somewhat more impulsive, more responsive to social stimulation, and more sensitive to the details of social situations. Nevertheless, there are many similarities in the two sets of results and the differences between the Project group and the bright middle-class white group with which they have been compared are fewer than one might have expected.

On more than one occasion, the Project teachers had mentioned difficulties in gaining and holding their pupils' attention. It was presumed that an educationally disadvantaged population would experience particular difficulty in this area, so an effort was made to examine the relation of attention and other non-intellectual factors to achievement.* In addition to attention, it was hypothesized that the reported instability in their home background and their general emotional adjustment would also be related to academic performance.

A variety of attention scores were derived from the *WISC* which had been previously administered. This included Cohen's (7) Freedom from Distractibility factors, (the mean of the Arithmetic and Digit Span sub-test scaled scores), the Coding sub-test scaled score, and a Digit Span Efficiency score (the algebraic difference between digits forwards and digits backwards). Two attention scores were derived from the "A" or Cancellation test, adapted from Whipple. (45) One of the measures (attention stability) reflected the amount of fluctuation per unit of work, while the other was computed according to Whipple's Efficiency score formula. The teachers' ratings of attention, taken from the *Rating Scale* for School Behavior, were also included.

In addition, four other measures were taken. These were the Barron Ego-strength Scale (2), the *WISC* Full Scale IQ, the mean grade-score on the *Metropolitan* from May 1962, and a measure of *Residential Stability* taken from school records. Because of some possible differences between boys and girls, the results were treated separately. The major statistical findings of this study are shown in Table 9.21. The results, briefly summarized here, indicate that the teachers' ratings of attention correlated substantially (.46, .52) with tested achievement. Partialling out teachers' ratings of achievement from these correlations reduced the correlation between attention ratings and achievement to insignificant levels. Correlations between intelligence and achievement were moderately high: .65 for the boys and .80 for the girls. While the major attention measure of concern (Attention Stability) did not correlate highly with achievement (reaching a low but probably significant level only for the girls) nor did the other non-intellectual factors (Residential Stability, Ego-strength) show substantial correlations, it appears that in combination they may possess moderate predictive power. Multiple correlations between tested achievement and Attention Stability, Ego-strength, and Residential Stability produced coefficients that were probably significant for the girls ($r = .49$, $p < .05$) and that barely missed significance for the boys ($r = .48$, $p < .07$).

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*A more complete report was presented at the Annual Convention of the Eastern Psychological Association, April 17, 1964 by Robert J. Lovinger, entitled "Attention and other non-intellectual factors related to achievement in educationally disadvantaged young adolescents."

The special measures of ability to attend that were used were not very successful in predicting achievement. It may be that more valid tests of attention could be found which would correlate more highly with achievement.

Family and Residential Stability

The permanent records of the Project group were studied for the following four items of information: (a) whether mother worked or not; (b) with whom the child lived (both parents, one parent, etc.); (c) number of school transfers in grade school; (d) number of address changes in grade school. These four items were combined to provide a scale with possible scores ranging from 0 to 8.

From the record cards, which were probably not completely accurate, it appeared that 53 percent of the group ($N = 66$) were living with both natural parents and 47 percent were not. Nearly twice as many girls as boys were living with both parents, so that considerably less than half of the boys were living in an intact family. The majority of the mothers (59 percent) appeared to be employed either part-time or full-time. When one parent was missing, it was nearly always the father. Residential stability was somewhat more intact than family makeup. Although we had anticipated that the group as a whole would have been highly mobile, only 35 percent had attended more than two elementary schools and 39 percent had changed address more than once. The majority of the children, therefore, had not done much moving around.

These items were checked to see if they helped improve the prediction of achievement. It was found that residential stability (Items c and d above) seemed to improve the degree of correlation with achievement obtainable from the Attention scores, but family characteristics (Items a and b above) did not.

It should also be noted, as we have pointed out in Chapter 4, that the children who stayed in the junior high school to the end of this study had somewhat higher initial test scores in both intelligence and achievement than the ones who left the school during this interval. It would therefore seem that we have additional confirmation of the idea that frequent change of residence and school has a depressing effect upon scholastic achievement.

Prediction of Gain in Achievement from Personality Data

As we reported in the discussion of Prediction of Achievement Gain earlier in this chapter, fourteen different gain scores were computed. These represented: the gains between the seventh grade and ninth grade results for the three WISC IQ's (Verbal, Performance, and Full Scale), the ten separate sub-tests of the Metropolitan, and the median grade score on the Metropolitan. Each of the separate scores on all of the personality tests used in this study and described above was correlated with each of the fourteen gain scores, resulting in well over a thousand correlation coefficients.

Of the various approaches in measuring personality, the only one that showed a fairly consistent, substantial correlation with gain in achievement was the Rating Scale for School Behavior. This could not really be considered a measure for predicting achievement, because it was simply an objective way of reporting the opinions of the three teachers concerning each child, and included ratings on school progress and closely related traits which certainly were based mainly on the teachers' perceptions of how well the children had been doing. The Rating Scale was filled out twice, near the end of the seventh and eighth grades. The correlations between the composite ratings of the three teachers and the total gain in achievement over the three years are shown in Table 9.22. Of the 26 traits rated, only one (Energy and Vigor) failed to have a significant correlation with gain in the seventh grade ratings. Quite a few of the ratings had correlations in the mid and high 40's. The highest correlation was obtained for "Neatness, Accepts Routines." In general the ratings on physical characteristics had the lowest predictive value, and those on temperament the next lowest, while the ratings on social behavior had almost as high predictive ability as those on school attitudes and scholastic achievement. The eighth grade ratings had somewhat higher correlations with three-year gain than the seventh grade ratings, as would be expected, since they were made when the Project was nearly two-thirds over. Ratings on eight of the traits correlated .50 higher with gain, and another seven of the correlations were in the .40's. Again the lowest correlations were for physical characteristics and traits of temperament. Social behavior ratings correlated somewhat less well with gains than the ratings on school attitudes and achievement did.

Each of the Rosenzweig scores was also correlated with gain. Many of these correlations were near 0, and none of them reaching as high as .30. It is evident that the separate test factors on this test when taken one by one do not show any useful relationship to achievement gain in this population. However, a clinical appraisal of each individual record, paying attention to the balance and interrelationship of the various scoring categories, might prove more successful.

Similar results were obtained with the Rorschach. Out of the many correlations between single Rorschach scores and the gain scores, a few barely reached the level of statistical significance. With such a large number of correlations, this might be expected as a result of chance variation. For the Rorschach, as well as for the Rosenzweig, the individual test scores do not seem useful for predicting gain in achievement. Again, a clinical analysis of each record might produce better results.

As was mentioned earlier, the special tests of ability to pay attention that were given by the Project psychologist did not correlate as well with achievement gain as did the rating on attention given by the teachers on the Rating Scale. We suspect that the tests that we selected for use were not really measuring those aspects of attention which related to achievement in pupils like these.

Absence. Attendance records were obtained for each semester of the three-year period. During the seventh grade there was a slight tendency for high absence to be related to lower achievement. After the seventh grade, there did not seem to be any discernible relationship between attendance and achievement gain.

Summary and Conclusions

The intelligence quotients of this group of disadvantaged young adolescents tended to center in the lower half of the average range. While there was a considerable variation within the group, the mean IQ's on relevant tests tended to remain within the range of 91 to 97 (except on Otis Beta). Of the intelligence tests studied, the most valuable was the Wechsler Intelligence Scale for Children, which had both a high correlation with initial achievement and a substantial ability to predict gain in achievement over the three-year period. Of the various group tests that were studied, the one that made the most favorable showing was the Cattell Culture-Fair Test, which did not correlate as well as the WISC with achievement at the beginning of the study, but did correlate with gain during the Project practically as well as the WISC did. The Pintner General Ability Test given in the eighth grade and the Otis Beta given in the sixth grade correlated more highly with achievement than they did with the other intelligence tests and produced lower IQ's. They seemed to be less suited for use with educationally disadvantaged childen for this reason.

The drop in IQ from beginning to end of elementary school which had been one of the major questions for study turned out to be mainly an illusion, created by the use of an unsuitable test in the sixth grade. As measured by the Cattell in the eighth grade and the WISC in the ninth grade, the IQ's of this group of children were approximately equal to what they had been in the first grade as measured by the Pintner-Cunningham.

Two group tests that had formerly been used in the New York Public Schools, the Pintner-Cunningham in the first grade and the Otis Alpha in the third grade, both showed up rather well in this study. The Pintner-Cunningham not only did not seem to put this group at a disadvantage as compared to the other IQ tests when means are compared, but also had a surprisingly substantial correlation with achievement at the beginning of the seventh grade, considering the six-year interval. The Otis Alpha in the third grade provided a mean IQ which was practically identical with the mean IQ of the WISC in the seventh grade, and also had a quite substantial relationship to seventh grade achievement. Judging from the present results, these two tests, neither of which requires any reading and neither of which seems obviously loaded with cultural content, could serve useful guidance functions in the elementary school even with educationally disadvantaged pupils.

In regard to the prediction of gain in achievement over the three years, initial achievement was found to correlate slightly less well with gain in achievement than initial intelligence did. With both the WISC and the Metropolitan, a weighted combination of the best sub-tests produced higher predictive correlations than did the total scores on these tests.

In general, the prediction of gain in achievement was not materially improved by the use of objective measures of personality. The one exception to this generalization was the fact that teacher ratings did correlate substantially with gain. However, teacher ratings were based upon substantial opportunity to observe the work of the pupils, and therefore cannot be fairly compared with tests given at the very beginning of the study in terms of ability to predict future improvement. Although several of the individual scores on some of the personality tests had some correlation with gain in achievement, none of these were sufficiently high to make the personality tests seem useful for the purpose of predicting achievement gain.

The results of the intelligence and achievement tests were also subjected to factor analysis. The WISC was found to have a substantial verbal academic factor. In addition there were two special factors, one centered in tests involving perceptual organization, the other apparently one of number ability. The Metropolitan Achievement Test, subjected to a similar analysis, was found to be primarily a measure of general achievement. Two minor additional factors were noted, one centering in those tests in which reading comprehension ability is important, another centering in the two arithmetic sub-tests, and a vocabulary factor.

The factor analysis in which the WISC and Metropolitan were combined revealed that there is a substantial commonality between these two instruments, which may be general intelligence or aptitude for school learning. In addition, two special factors previously found in the WISC and two previously found in the Metropolitan reappeared with practically no overlapping between the WISC factors and the Metropolitan factors.

It seems highly significant that the factoral analysis revealed the same underlying structure of abilities as was revealed in the study which was carried out on the normative group consisting mainly of middle-class white children. While there are evidences of educational disadvantage in the patterns of higher and lower scores of the present group, the general intellectual pattern does not differ essentially from that of white children, except for a lower relationship between verbal and non-verbal abilities.

The personality characteristics of this group of young adolescents were studied by several objective techniques. These included rating scales filled out by the teachers and two well-known personality projective tests, the Rorschach and the Rosenzweig.

The personality tests are consistent in describing this group as relatively immature, impulsive, below average in self-control, and likely to react in frustrating situations by directing aggression against some feature of the environment. On the other hand, they seem to be somewhat more socially responsive and somewhat more sensitive to the finer shadings in social situations than are the middle-class groups with which they have been compared. Finally, there are many similarities in the personality test patterns of the present grouping and the normative groups, and the differences seem to be ones of degree rather than kind. The absence of corresponding results on groups of lower-class white children makes it difficult to determine to what extent these differences are the result of cultural difference, or to what extent they may simply be related to differences in general intellectual ability and maturity.

Part III

THE AFTER-SCHOOL PROJECT

Chapter 10

The After-School Centers: Description and Evaluation

Background and Description

The College Field Experience Program

At Queens College, after an initial course in which the prospective secondary school teacher studies contemporary education through readings, class lectures, discussions, and school visits, he enrolls in a two-semester course entitled THE PSYCHOLOGY OF THE ADOLESCENT STUDENT.* This course, which a student usually begins during the lower or upper junior semester, is concerned with "the significant factors of adolescent development and the underlying principles of learning and adjustment" relevant to the tasks of a teacher (Queens College Bulletin, 1964-65, p. 149). Although it is difficult to discuss the course in terms of two distinct subject categories, the first semester is concerned primarily with the study of human development, the second semester with learning and evaluation processes in the classroom. The instructors in this course seek to teach the theories and facts of physical, intellectual, emotional, and social growth of adolescents; understanding of the ways in which the students' self-understanding can relate to their performance as teachers; and elementary skills of group leadership among adolescents.

As a part of their work for this course, students are required to spend at least one afternoon or evening a week for a year in supervised group work experience. It is largely in this activity that the College instructors expect their students to become acquainted through first-hand contact with the values, interests, and needs of adolescents. The College undergraduate is usually only a few years older than the young people with whom he works; his experience up to this time has probably been within a relatively narrow social range, has generally been as a peer participant and not as a responsible adult, and has been unorganized and unanalyzed. Consequently, he is asked to participate in the youth program of a recreational agency center where he is given the opportunity, under supervision, to work in a leadership role with adolescents. The agency centers, which are found in areas ranging from lower-lower through upper-middle class, are sponsored either by religious associations (though the student-led activities have little or no religious content), by housing or community projects, or by independent community centers which usually are supported by philanthropic funds.

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*This course is numbered Education 13-14. The courses that secondary education students take after Education 13-14 are METHODS OF TEACHING IN SECONDARY SCHOOLS (Education 51), THE TEACHING OF A SECONDARY SCHOOL SUBJECT (Education 61), and SUPERVISED OBSERVATION AND STUDENT TEACHING (Education 73).

Though many agencies are eager to have college students participate in their programs, most are looking primarily for assistance. Though the agency's need is often great, the College views field experience primarily as learning for the student and only incidentally as service to the agency. The College student is usually not qualified to serve professionally, having neither the skill nor the judgment to conduct an adequate program without close supervision. Consequently, those agencies which cannot give the necessary supervision must be excluded from the program.

The adolescent groups with which the prospective teachers work usually take the form of friendship clubs, which meet primarily for social purposes, but which may develop various group projects; interest groups, such as those which get involved in photography or sewing; or "lounge groups," which function as relatively unstructured and unsupervised playroom settings. Regardless of the setting, however, students are encouraged to make the kinds of contacts with youngsters which are most likely to yield insights related to personal development. Through supervisory conferences with agency personnel, in small group conferences at the College, and in required course papers, the student develops observational skills and insights into his own attitudes, values, and behavior, as well as those of the members of his group. It is assumed that the student begins to develop a more mature, professional self-concept as he explores his relationships with his agency and his group members. His role as a leader is clarified and defined, and varied concepts of leadership are discussed. Eventually, these analyses are helpful in developing an understanding of teacher-pupil relationships by a comparison of roles of group leader and classroom teacher.

Dr. Kornberg's Proposal for After-School Centers

Partially as a reaction to the difficulty in placing the increasing numbers of students in suitable agency programs, Dr. Kornberg in 1960 suggested that after-school subject-oriented interest centers be established in several junior high schools to supplement the available social agencies. He thought that such centers, which eventually became known as after-school tutorial centers, might have qualities which some of the community centers then in use lacked. It would be possible, for example, to have more control over the type of adolescent with whom the college students would come in contact, for some schools could be selected in which the pupils were predominantly lower class Negroes and Puerto Ricans. Further, the college students' orientation for the field experience could be more extensive. Since the program would take place in the school, in some cases the college students could visit the school while it was in session and observe the young people in the classroom setting. Understanding of the community would be enhanced, for the relation of the school and the community would be made manifest in the lives of those attending the after-school centers. Moreover, it seemed that while the tutorial setting would be more aligned with actual teaching situations, it would still allow for the kinds of contacts with adolescents that were commensurate with the general group process and student self-insight goals of the field work.* This would be true especially if the tutoring served as a first step in the development of leader-pupil social relationships.

Dr. Kornberg hypothesized several outcomes from such an after-school program.

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*It should be noted that some research in transfer of training indicates that while criterion task (e.g., agency field experiences) may be just as important for learning purposes as the practice tasks (e.g., realistic student teaching experiences), the desirable quality and degree of difference between the tasks is not yet known (37).

He felt it probable that opportunities to be genuinely helpful to youngsters in need would appeal to the latent idealism of many Queens College education students and would positively affect their involvement in the education courses. Also, it seemed that such an experience early in the teacher education program, with such real teaching problems as handling pupil resistance to school work, finding relevant and suitable reading materials; and exploring ways to make words, concepts, and skills meaningful would eventuate in more effective participation in the psychology and methods courses. If the foregoing is true, education students participating in BRIDGE after-school experience would probably show less reluctance than other students to accept appointments in schools with disadvantaged populations and would be more confident and effective teachers of these children.

The Schools

The after-school program, instituted in September 1961, included six "special service" junior high schools, of which two were in Manhattan and four in Queens. The schools in Manhattan were in locations more nearly like the non-New Yorker's stereotype of a big city slum than were those in Queens. One was located on the lower East Side, the traditional home of immigrants in New York City. Housing was poor, and the people were amazingly diverse in background. Puerto Rocans, Negroes, Chinese, Russians, Poles, Italians, Jews, Greeks, and Irish lived in juxtaposition. The other school in Manhattan had more of the characteristics of the modern urban ghetto. Situated on the upper East Side, it stood among slum tenements with a population almost entirely Puerto Rican and Negro. Here the Puerto Ricans outnumbered the Negroes, though the Negro minority was substantial.

The schools in Queens were quite different. As one of the City's huge residential areas, Queens has a predominantly suburban atmosphere, although it has areas of deterioration where the influx of light and heavy industry and neglect of the housing combine to produce pockets of poverty. Two of the schools were located in South Jamaica, where the largest Negro concentration in the Borough of Queens is found. At one time a residential area for whites of modest income, this area houses working-class Negroes. Scattered among the small dwellings, many of which are deteriorated, are the new, solidly built houses of a small Negro middle class. In contrast, the other two Queens schools were in areas inhabited predominantly by whites and adjacent to large industrial centers. These were what current nomenclature might designate as "fringe" schools, for a substantial minority of the school population was Negro.

Thus, all of the after-school centers were in depressed areas. Generally, the pupils were children of the poor and many of them were members of disadvantaged minority groups. Their average academic achievement was well below the norm for the City. Educationally, many, though not all, were handicapped by their restricted social and cultural experience, by their inadequate language skills, by the poverty and instability of their families, and by disabilities related to their ethnic positions.

The Supervisors

In some ways the most critical administrative problem related to the after-school centers was the selection of the supervisors for the after-school centers and their orientation to their tasks. At first a creative teacher in one junior high school, closely associated with the College, was selected and assigned to two different centers in Queens. It was quickly discovered, however, that a person without official status in the specific junior high school housing the after-school program was handicapped in supervising the students at the center. He could not be as well acquainted with or oriented to the school, the teachers, the administration, or the pupils as would be necessary if the program were to have a chance of success. Thereafter, the supervisors were selected from the staffs of the schools in which the centers were located. They were teachers, guidance counselors, or teaching supervisors from the regular session of the school, and either volunteered or were selected for their interest in the children of their schools and their reputation for effective functioning with them.

After-School Centers and Course-Related Activities

To each of the selected schools went approximately ten college students each week for 24 weeks. At the schools the students met with small groups of youngsters whom they tried to help in their studies or with whom they engaged in activities which they hoped would add cultural enrichment to their lives. The program began shortly after the school day had ended and continued for about an hour. During this time the children read or studied mathematics, science, social studies, or a foreign language. Some made up plays, edited newspapers, wrote letters to pen pals in foreign countries, sang folk songs, or held social affairs. At times they left the school to visit Queens College or a park, library, or museum. Some came to the centers reluctantly; others, eagerly. In most cases they came seeking help in order that they could do better academically.

After each session had been concluded, the undergraduates usually discussed with their supervisor what they had observed and done, how the children had responded, what problems had developed during the session, and what plans they had for the future. Whenever it seemed pertinent and possible, the supervisor tried to acquaint the students with life in the community and the ways in which the school tried to meet the needs of children in that particular depressed neighborhood.

Discussion and analysis of the experience also took place at the College. To the extent that the instructor in the regular session of the psychology course knew of the experiences of his students in the after-school centers (and in the agency centers), he wove this material into class discussions. In addition, during the year special small groups met within the regular course periods to focus discussion specifically on agency or after-school experience. In a typical situation two class instructors, whose classes met at different hours, would combine with the field work consultant in charge of the field experience placement to lead small group discussions in each class. A class of about 30 students would thus be subdivided into groups of ten, and one staff member would meet with each group. Though what transpired in each group was under the direction of the specific staff member, the discussions most often pertained to such topics and questions as the following:

1. What kinds of relationships do the students have with their pupils? How do they feel in dealing with the problems that arise? How do they react to evidences of hostility, boredom, or friendship? How do their ego-needs and adjustment patterns affect them as leaders? Are they objective and fair, or biased and/or judgmental?

2. What are the characteristics of the children? How do they react to each other? What stimulates their interest? What bores them? What are their goals? What evidence of social class and "disadvantagedness" is in evidence among the children? What stereotypes do the children have? Upon what stereotypes do they themselves act?

3. What is the leader's role in the group? How does he get a group to contribute to the development of its own program? When does he make suggestions? When does he give directions? What is "discipline" and how does he "keep it"?

4. What is the role of a professional in such a situation? How does he see his responsibilities? How does he react to feelings? How does this experience relate to teaching? What evidence is there that certain professional skills have developed?

Regular term paper assignments and personal reaction reports related to the field work supplemented these activities and discussions in an attempt to make most meaningful the agency and after-school experiences.

Some Special Problems

The early sessions brought to light a significant problem of the after-school program: How to reconcile the College's desire to use the centers to acquaint its students with the full range of values, interests, and behavior of adolescents living in depressed areas, with the desire of the school people (whether teachers, administrators, or pupils) for tutorial service for the limited purpose of remedying the lacks in academic achievement of these young people. The supervisors, though sympathetic with the general aims of the College staff, were deeply involved in the learning problems of their pupils. Their concern was reinforced by the expectations of their fellow teachers, counselors, and supervisors. The pupils, too, were most responsive to the idea that the centers were places where they could obtain help. They wanted to be taught, not simply to be understood. On the other hand, few of the College students had many valid notions of the ways in which one can help a youngster improve his reading or his mathematics, or his knowledge of science and social studies. Moreover, though some possessed the necessary teaching concepts, they generally did not have access to the materials which successful programs in these subject areas would require. Only gradually were the supervisors able to bring together these divergent, though not necessarily contradictory purposes in programs which combined "learning" as envisioned by the pupil with "learning" as defined by the College staff and students.

In an attempt to determine the efficacy of the BRIDGE after-school experience, both informal and formal evaluations of the program were conducted. Below are some aspects of the informal evaluation.

Informal Evaluations

In their responses to a questionnaire circulated by the Project director in the spring of 1964, the supervisors were unanimous in approving the program. They felt that it had given many of the pupils opportunities to make new friends in their own age group, to become friendly with and develop loyalty toward college students from outside the neighborhood, to raise both their academic achievement and their morale, to develop a sense of belonging to schools which were important enough to receive the attention of a college. If there was any disappointment, it was that the tutorial program was not well enough organized and executed to satisfy their, and the pupils', demands for academic help. Furthermore, it seemed to the supervisors that the program had limitations in terms of the school's needs, for it probably did not reach those pupils who most needed help. After all, the really "hard core" youngsters generally are not those who volunteer for such a program. Consequently, this apparently valuable experience was limited to those pupils whose attitude toward school and school-related tasks was comparatively favorable.

In spite of the fact that the program was handicapped by lack of complete clarity of purpose, paucity of materials, and certain organizational problems, the supervisors were convinced that the program had had a substantial positive impact on the attitudes of the College students. They sensed that it had broken down stereotypes about the children in their schools. One supervisor reported, for example, that "They [the college students] found sensitivity, alertness, vivacity, and warmth here instead of dullness, apathy, antagonism, and withdrawal." Apparently, as the students' fears gradually waned and as their anxiety decreased, they were able to perceive and understand more deeply. They seemed to empathize with the youngsters, to discover the pupils' interests, and to encourage the pupils to reveal their thinking in natural, spontaneous ways. As they did this, they appeared to develop some sense of competence in working with these boys and girls. In addition, several of the supervisors felt that the students had emerged more rapidly "as maturing individuals" during this period than they probably would have without the experience.

When asked to make recommendations for the improvement of the program, the supervisors suggested that among other things the goals and the roles of the students in the centers should be more sharply clarified, that groups should be held to a maximum of six children per college student, that the College should have available a handbook on suggested activities to help students begin the program, and that College staff members should take a more active part in the activities at the centers when they were in operation.

The reactions of the College instructors whose students participated in the after-school program from the beginning seemed to range from skepticism to positive commitment. Generally, however, a spirit of suspension of judgment prevailed. In fact, some instructors who were at first hesitant reported that those students in the after-school settings seemed to have made meaningful personal and professional growth as evidenced by class discussions and papers. Others felt, however, that while the After-School Project had had significant impact on some of the students, it was not a satisfactory replacement for the more informal, out-of-school community agency setting. They felt that in the after-school centers there was a tendency for the students to focus their efforts and attention on the tutoring aspects inherent in the situation at the expense of leader-pupil social and emotional interaction. Not surprisingly, the divergence of feelings among the instructors regarding the value of field work experience mirrors the contradictory findings of formal research regarding the impact of field experience on students' attitudes and skills. (4, 12, 22, 23)

Although the instructors did not have the full responsibility for determining whether or not the after-school centers should become a permanent part of the teacher education program, several Educational Psychology Committee meetings were devoted to debate regarding the relative merits of the after-school and agency experiences. If unanimity was not achieved, the discussions did seem to produce a feeling that there was at least the possibility that there is more than one type of experience leading to a given set of goals. Certainly, most of the instructors clearly felt that a more careful, formal evaluation of both the agency and after-school experiences was in order if professional judgments based upon anything approaching "hard" evidence were ever to be made.

Termination of the Program

The after-school program lasted for a little more than three years, from 1961 to 1964. In 1962-63, a year during which five schools were involved, a formal exploratory investigation was made of the impact on education students of the after-school experience as compared to agency experiences (see below). In the final year of the program four schools had centers. At this stage The City University assumed the cost of the supervision. During that year the public schools of New York City initiated a large program of after-school tutorial centers with licensed teachers staffing them. Most of the schools in the College-related program were designated as tutorial centers and the College program ceased to be viable. During the after-school program's period of operation, about 170 college students, each for one school year, had fairly regular contact with a total of approximately 1,000 junior high school pupils.

The Formal Evaluation Study

Purposes of the Study

This study was primarily an attempt to validate Dr. Kornberg's conviction that a one-year after-school (BRIDGE) experience, in conjunction with the course THE PSYCHOLOGY OF THE ADOLESCENT STUDENT, would produce greater increases in motivation in education students to teach the disadvantaged than would the community agency (Non-BRIDGE) experience. Some of the dependent variables other than teaching preferences studied were student changes in social class understanding, in social class attitudes, in professional skills, and in leadership and nurturance orientations.*

The hypotheses underlying this investigation can be stated formally as follows:

1. The BRIDGE Group students would make greater movement toward preferring to teach the disadvantaged than would the Non-BRIDGE Group students.
2. There would be greater gains in the BRIDGE Group in class understandings, in positive attitudes, in professional skills, and in leadership and nurturance orientation that there would be in the Non-BRIDGE Group.

If the BRIDGE experience was more professionally meaningful and personally satisfying to the students than was the Non-BRIDGE experience, one might hypothesize further that

3. A greater number of BRIDGE students would continue in the Queens College teacher education program through the student teaching semester.
4. Those students who had had the BRIDGE experience would secure higher grades in education courses, and that
5. Hypotheses 1-4 would be valid even when BRIDGE students were compared to those Non-BRIDGE students who had had their field experience in situations sociologically similar to the BRIDGE settings.

Obviously, the variables and conditions that need to be controlled in isolating related causal factors and validating the above hypotheses are substantial. Nevertheless, it seemed that an attempt to find validation for these assumptions, even if resulting in less than definitive results, would still fulfill the purpose of achieving greater understanding both of the field experience as part of the education sequence and of the change in Queens College secondary education students during their junior year. At the least, this study could suggest bases for both appraising specific aspects of the Queens College program and developing other hypotheses to be tested in future investigations.

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*Several terms included in the hypotheses will be defined or expressed operationally later in this chapter when the instruments utilized in this study are described.

Samples and Procedures

The two basic groups included in this study were drawn from an initial sample of 134 students, distributed in five educational psychology classes taught by different instructors. A random sample of 50 students comprised the initial BRIDGE Group, while 84 students were included in the initial Non-BRIDGE Group. During the school year 10 students (20 percent) from the BRIDGE Group dropped out of the program, while 20 (24 percent) from the Non-BRIDGE Group left, leaving a total of 40 students in the final BRIDGE sample, and 64 students in the Non-BRIDGE Group. Chi-square analysis comparing the number of dropouts in the two groups indicated that there was no significant difference in the respective dropout rates.

As can be seen in Table 10.1 (see Appendix D), the final two sample groups were comparable in several factors assumed relevant: sex, age, marital status, and social class standing as suggested by parental occupations, residences, and educational levels. Further, an analysis of cumulative college averages and SAT Verbal scores suggested that the two groups were comparable in academic aptitude (see Table 10.1). A comparison of SAT math scores, however, indicated a significant difference in favor of the Non-BRIDGE Group. Nevertheless, since it is probable that achievement in courses or experiences that involve human interaction are not very highly dependent on mathematics aptitude, for purposes of this study the two groups may be considered comparable.

All the students who had agency field experience with disadvantaged lower class youngsters were drawn out of the Non-BRIDGE Group to form a smaller, Non-BRIDGE Lower sample group.* This latter group was comprised of 24 students, who, when compared to the BRIDGE Group, were not significantly different on the relevant equating variables previously mentioned, except on SAT math scores (see Tables 10.3 and 10.4).

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*Whether or not an agency was rated as disadvantaged or lower class was determined by the Consultant of Agency Field Placement, Queens College. Fortunately, the Consultant was well aware of the BRIDGE settings and utilized this knowledge as one of the bases for making her appraisals. As can be inferred from the relative number of Non-BRIDGE Lower placements, the majority of Non-BRIDGE placements were in middle class settings.

In order to gather data related to the hypotheses in this study, both pre- and post-testing of students was necessary. The five major instruments were administered to the students during the first week of October in the first semester and in the first week of May in the second semester in Education 13 and 14, respectively. Most of the students finished all testing during a single class period; a few finished the tests outside of class. The students were assured that while the taking of the tests was part of an important research project, individual test data would be held confidential.

Information regarding course grades and placement during student teaching was collected from school records already kept as an on-going part of the teacher education program.

Incidentally, the pre-test results generally supported the supposition that the sample groups were drawn from very similar populations. What few pre-test differences did exist and possible reasons for these differences will be discussed later in this chapter.

The Major Instruments

The Personal Background Data Questionnaire (see Appendix D) was developed especially for this study and is an attempt to elicit information regarding personal characteristics of the students and their expressed teaching choices.* It was this questionnaire, which includes 21 items, that served as the basis for equating the groups on such strategic variables as sex, age, and social class background.

Teaching-choice items in the Questionnaire asked the respondent to rank his teaching preferences in relation to different class settings, characteristics of youngsters to be taught, teaching locale desired, and whether or not the examinee preferred a

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*All the instruments especially developed for this study were constructed by Dr. Kornberg and the initial consultant for the After-School Project evaluation. Those and other instruments appear in Appendix D in the order in which they are referred to.

"progressive" setting to one which was traditional. (Students were asked to provide their own definitions for both, and generally, they saw "progressive" as implying a guidance-oriented student-centered situation, and "traditional" as a situation essentially demanding academic competence and the conforming to definite standards.)

One limitation of this instrument was that while it did yield information regarding the hierarchy of student choices, it did not yield insights relating to the intensity of either first choices or, perhaps more importantly, intensity of negative feelings underlying last or next-to-last choices.

Another instrument developed for this study and utilized in an attempt to determine changes in understanding of certain social class dynamics in America was the Survey of Social Class Understandings (see Appendix D). This inventory consisted of thirty statements, most of which included aspects of lower class living and to which the student responded K if he knew the statement to be true, U if he was undecided regarding the truth or falsity of the statement, F if he knew the statement to be false, and N if he felt he had never heard of whatever the statement referred to. Total correct responses for each student were determined by how well his answers matched the criterion answers as determined by the experience of the test-authors and standard texts (e.g., 20, 25).

The character and intent of the statements in the Survey are exemplified by the following:

Item 9: A dominant approach of the culturally disadvantaged person is "to get by" rather than "to get ahead."

Item 3: Generally, culturally disadvantaged youngsters have less need of clear routines and expectation than middle class children.

Item 15: Generally, the lower class child is interested in education.

As with the other instruments utilized in this study, validation of this survey before the experiment was not possible. It is quite clear from the nature of the items, however, that something other than conceptual understandings was also being measured.

A reliability check* of pre-test scores showed the lowest estimate of internal reliability to be .37; the highest, .62. The fact that this study primarily called for group comparisons alleviates to some degree the limitation of low internal reliability in this instrument.

The Self-Awareness Attitude Inventory (see Appendix D) was developed in an attempt to ascertain attitudes of the students toward lower class, disadvantaged adolescents. This inventory was composed of 26 heavily personalized statements to which the examinee responded Y if he agreed with the statement, N if he disagreed, and U if he were uncertain as to its validity. The obviously extreme personal-emotional dimensions of the statements are shown by the following examples:

Item 1: I'd like to be friendly with some Puerto Rican families.

Item 6: I am aware of being prejudiced against Negroes and Puerto Ricans.

Item 22: Adolescent hairdos show poor taste.

Actually, the face validity of such items in relation to negative or positive attitudes seems quite high. The relatively low pre-test reliabilities (.48 to .71) of the total positive scores probably indicates, among other things, an attempt by the students to give desirable and acceptable responses and the inconsistency with which the items suggest these responses.

Status and changes in felt professional skills among the students were determined by the Professional Experiences Checklist (see Appendix D). This inventory was divided into two parts. One part included statements attempting to get at the degree of confidence students felt in dealing with adolescents and their problems, and the other attempted to determine to what extent students had actually had contact with certain aspects of adolescent life. These problem and contact areas were selected from the personal experience of the Checklist authors and from what generally can be considered the body of formal information concerning adolescent development (i.e., current textbooks on adolescent psychology).

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*The lowest estimates of reliability in this study are determined by the use of Froelich's adjustment of the Kuder-Richardson formula, the highest by getting the square root of the split-half reliability coefficients as determined by the Spearman-Braun formula.

The first part of the inventory included eighteen items. The examinees were asked to respond D if they had done it, VC if they felt very regarding their ability to handle the problem, FC if they were fairly confident, SI if they felt slightly insecure, and VI if they were very insecure. Two of the problem areas were:

Item 7: to observe what is significant about adolescent behavior.

Item 13: to reconcile verbally aggressive adolescent behavior.

As it turned out, there were relatively few "very confident" responses. Therefore, in an attempt to determine internal reliability of the "confidence" responses on the inventory, the "very confident" and "fairly confident" reactions were combined to make up a single confidence score. The reliability coefficients ranged from the lower limit of .72 to the maximum upper possibility of .86, both of which are at what the investigators felt was a useful level for such an instrument as the Checklist.

The second part of the Checklist asked the students to respond Y (Yes) if they had had contact and N (No) if they hadn't, with the examples of adolescent life listed. Some aspects of adolescent life included were fads, sexual behavior, idealism, and religious interests. One limitation in this twenty-item part of the inventory was indicated when the mean for all students examined at the pre-test turned out to be close to 16.00, leaving little room for positive changes to be manifested.

The personal adjustment measure in this investigation, the Queens College Adjustment Questionnaire (see Appendix D) was one that had originally been utilized in the Counseling Center at Queens College.* This questionnaire included 30 items that required the examinee to react "never," "somewhat," "an average amount," "usually," and "practically always," to such questions as

Do you find it hard to get down to studying?

Do you get stage fright?

Do you get discouraged easily?

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*Although some counselors report that the Questionnaire was useful in counseling, actual data regarding validation was not available.

Reliability coefficients of pre-test total adjustment scores ranged from .64 to .82, of which the latter represents an acceptable level of stability for personality adjustment inventories.

The Self-Inventory on Field Experience (see Appendix D) was constructed to allow for free responses in an attempt to get at as many feelings and attitude changes on the part of the students as possible, but especially to ascertain leadership and nurturance orientation. This instrument was a sentence-completion type inventory that included the following six incomplete statements:

1. I look forward to (back at) my field experiences with feelings of__________
2. I look upon myself in relation to adolescents as__________
3. In working with adolescents my greatest assets are (were)__________
4. In working with adolescents my greatest liabilities are (were)__________
5. For me, teaching as a career is__________
6. From this field experience I expect to get (got)__________

In order to determine meaningful categories of responses, the pre-test responses of a random sample of 60 students drawn from the initial sample were analyzed in terms of content as related to some of the goals of this study.* The reactions to each question were categorized into what appeared to be separate if related categories. (See Appendix D for categories and examples of responses.) Some of the major response categories were:

Dominance-Leadership:	Refers to reactions in which students see themselves as more mature and/or able to guide adolescents (e.g., "an able leader")
Nurturance:	Refers to reactions suggesting desire to help others (e.g., "wonderful opportunity to help")

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*The total number of responses finally analyzed for the purpose of developing categories was 360; the total number finally analyzed for purposes of comparative statistical analysis was 1,230.

Security-positive:	Refers to reactions that are general but suggest freedom from anxiety and favorable feelings (e.g., "eagerness to learn")
Personal and Self:	Generally, relates to reactions suggesting either one's own aggrandizement, reward, or limitation (e.g., "self-rewarding experience")

Tests for reliability yielded an intra-person stability of .93, an inter-person stability of .86.* Both of these coefficients are clearly in the acceptable range of reliabilities when the criterion responses are of the sentence-completion type elicited on the Self-Inventory.

Treatment of the Data

The major statistical analyses in this study involved (1) the comparisons of pre-test responses between the groups, (2) the comparing of pre-test responses to post-test responses in each sample in order to determine changes within each group during the school year, and (3) the comparing of BRIDGE post-test responses to post-test responses of the other sample groups so that inferences could be drawn regarding the relative impact of the three different field experiences.

In order to test significance of changes within groups, correlated t-test and chi-square formulae were utilized. Uncorrelated statistical procedures were employed when information regarding differences between groups at the pre-test, post-test, or follow-up levels were desired. In most cases where teaching choice data was involved, both chi-square analyses of the distribution of choices as well as t-test analysis of separate choices were made, although not all of both analyses are reported here. As might be expected, co-variance analyses became necessary in a few instances. In all cases small sample formulae were selected; further, appropriate adjustments were made when the N's in chi-square analysis were very small. In this study, as in the rest of the Project, the .05 level was considered the point of statistical significance.

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*The second consultant for the After-School Project evaluation did the content analysis. A psychologist in the Education Department at Queens College acted as the inter-person reliability check. A random sample of 100 of the 360 items mentioned above served as the basis for both the intra and inter-person reliability determinations.

Limitations of the Study

There are several limitations that must be noted or re-emphasized. The absence of the time necessary to build instruments fully tested for test re-test reliability, and concept and predictive validity before the experiment resulted in limitations related to the use of these instruments. Although several of the pre-test reliabilities previously discussed reached acceptable levels, and while face validity may have been present in all the instruments, one cannot be as certain as desirable of either the identity or number of functions being measured. Unfortunately, it was necessary to administer the pre-tests after students already had been assigned to either after-school or agency placements. This factor combined with the generally observed tendency of college students to attempt to "throw" tests in the direction of the situational cues may account for the fact that BRIDGE students as a group expressed greater preference for lower-class public school teaching situations on the pre-test than did the Non-BRIDGE students. Moreover, although the College and outside activities other than the field experience of the groups were assumed to be randomly apportioned in similar fashion for all groups, no specific attempts were made to support this assumption.

Although the writer of this report feels certain that no conscious attempt by any instructor was made to favor either BRIDGE or Non-BRIDGE students, the fact that they knew of the hypotheses in this study makes it necessary for analyses of student grades to be considered with possible instructor bias in mind. In regard to evaluation procedures, it should be noted further that the investigators in this study would have preferred to employ outside psychiatrists and psychologists for such analytic techniques as depth student interviews, but that lack of funds made this impossible. Similar considerations prevented reading and analysis by a second reader of all the sentence completion responses secured from the Self-Inventory on Field Experience. It must also be recognized that the design of this study did not allow for a detailed exploration of the relationship of the middle-class oriented field experiences to changes in attitudes related to the middle-class. For example, both the Survey of Social Class Understandings and Self-Awareness Attitude Inventory included items primarily related to the lower class and disadvantaged adolescents.

This report itself is limited in that all the specific rationale, definitions, and relationships to past research findings needed to fill out a critically pivotal research study are not given. It is hoped, however, that time and funds will be available to investigate further and to report in greater detail some of the sub-aspects of this investigation (e.g., differences in field and course performance between students who scored high on leadership orientation and those who scored lower). Certainly this study must be considered exploratory in purpose and whatever findings are reported must be rated as suggestive rather than definitive.

Findings Related to Teaching Choices

Only short summaries of what seem to be the most significant findings will be given in the text of this report. The amount and complexity of relevant statistical data are such that the reader is strongly advised to refer to Appendix D for the tables, copies of measuring instruments, and supplementary materials relevant to this chapter. The investigators expect to report fully at a later date some of the more pertinent and promising parts of this exploratory study.

On reading the tables related to this chapter, the reader should note that in the relatively smaller Non-BRIDGE Lower Group (N = 24), larger proportional differences must be present in order to reach the statistical points of significance than must be present in the other groups. Also, the N's of forty, sixty-four, and twenty-four for the BRIDGE, Non-BRIDGE, and Non-BRIDGE Lower Groups, respectively, should be kept in mind when percentage difference analyses are presented.

As will be remembered from previous discussions in this chapter, the main source of data on where the students preferred to teach was the Personal Background Data Questionnaire. An analysis of pre- and post-test responses as shown in Tables 10.5-10.6 and 10.11-10.15 did not yield evidence to support the hypothesis that those students in the

BRIDGE placements would be more attracted to teaching the disadvantaged at the end of the year than would those placed in other settings; no group had proportionally more students so attracted than any other group. Neither did analyses of pre- to post-test changes within groups suggest that significant changes regarding teaching choices had been made.

It is apparent that all three experimental groups preferred at the beginning of the year and continued to prefer normal youngsters as compared to delinquent or handicapped; socially mixed or middle class youngsters as compared to those from the lower class; any or middle class settings as compared to lower class slums; and progressive public school situations as compared to private or parochial traditional settings. It is also apparent that the preference level among secondary education students for teaching Puerto Rican or Negro youngsters, or youngsters who are retarded, is of low magnitude indeed. Even where expressed first and second rank choices are combined, in no sample did more than 9 percent express preference for teaching any of these youngsters.

In regard to selecting New York City first as a place to teach (Item 13), the percentage from pre- to post-test remained approximately 60 percent for the BRIDGE Group and 31 percent for both the Non-BRIDGE and Non-BRIDGE Lower Groups and thus did not vary significantly; nor did second rank preferences, related to the same teaching situation, vary significantly from pre- to post-testing in any of the sample groups.

First rank preference percentage levels in regard to teaching in public schools from pre- to post-testing were approximately 82 percent for the BRIDGE students, 58 percent for the Non-BRIDGE students, and 75 percent for students in Non-BRIDGE-Lower placements. The percentage of the BRIDGE Groups who preferred lower class slums in which to teach either at the first or second rank choices at the pre and post levels was approximately 30 percent; for the Non-BRIDGE Groups, 8 percent; and for the Non-BRIDGE Lower students, also 8 percent. The consistency of pre- to post-test preferences obviates the possibility that the BRIDGE Groups made significant changes in expressed teaching choices over the school year, or that the BRIDGE Groups made more significant preference changes in the direction of the disadvantaged than did the other sample groups.

One reason for the radical differences between the BRIDGE and Non-BRIDGE students in the choices of public schools, New York City, and lower class slums as preferred teaching situations might be related to the possible hesitance of BRIDGE students to manifest a choice incongruous with their after-school placements in urban, disadvantaged areas. This deduction is given some support by the fact that pre-test selections were made after placements had already been assigned, while post-test preferences were given before the school year had ended and before second term grades in the educational psychology course had been established. The fact that the BRIDGE students retained their high preference for New York City schools even after having had some experience in at least one of these schools may be significant, however. Further, it would seem of relevance to note that if preferences for New York City, public schools, and disadvantaged teaching placements did not change positively in any of the sample groups, neither did these preferences change negatively.

Findings Related to Understandings, Attitudes, Professional Skills, and Personal Adjustment

The statistical analyses of responses to the Survey on Social Class Understandings, Self-Awareness Attitude Inventory, Professional Skills Checklist, and Queens College Questionnaire are presented in Tables 10.7, 10.8, and 10.16-10.20.

It can be seen that all three experimental groups made statistically significant positive gains in social class understandings during the school year, the BRIDGE students moving from a mean score of 13.43 to one of 14.95; the Non-BRIDGE, from 13.44 to 17.85; and the Non-BRIDGE-Lower, from a mean score of 13.66 to one of 17.51. The gain for the BRIDGE Group was statistically significant at the .05 level, and at the $<.001$ level for the other two groups. Post-test comparisons made it clear (see Tables 10.19 and 10.20) that the Non-BRIDGE and Non-BRIDGE-Lower students had made significantly greater gains in social class understandings than had the students having the after-school center experience.

As indicated previously in this chapter, the primary purpose of the Self-Awareness Attitude Inventory was to get a measure of the degree of acceptance by the sample groups of lower class Negro and Puerto Rican adolescents. Table 10.16 will show that the BRIDGE Group changed significantly and positively, moving from a pre-test mean score of 11.73 to a post-test mean of 13.68. Analysis of Non-BRIDGE and Non-BRIDGE-Lower students' attitude responses did not yield pre- and post-test differences that reached significance. However, post-test comparisons between the groups did not yield statistical evidence that the BRIDGE Group had changed significantly more than had the other groups. Thus, analysis revealed the confusing but not unheard of finding that one group, in this case BRIDGE, had changed significantly, but that a change difference between BRIDGE and the other two groups, (i.e., Non-BRIDGE and Non-BRIDGE-Lower) was probably due to chance.*

In an attempt to shed further light on the attitudes of secondary education students and differences between the sample groups, an item analysis of the Self-Awareness Attitude Inventory was made. Several of the analyses proved enlightening. For example, of the total of 104 respondents replying to the item "I'd like to be friendly with some Puerto Rican families," six replied "no" and 39 answered "uncertain." In pre-test response to the item "I'd rather avoid trouble and stay away from lower class neighborhoods," 26 out of 104 students reported "uncertain" and 22 answered "yes." One inference that might be drawn is that a large proportion (40-50 percent) of the students tested in this study were fearful or hesitant about going into lower class neighborhoods. Other analyses showed, somewhat incongruously, that at both the pre-test and post-test levels at least 50 percent of the students studied would "like to be friendly with some Puerto Rican families," "would like to discover their feelings towards Negro and Puerto Rican adolescents," were "not afraid to walk in an all-Puerto Rican neighborhood," and were "not afraid of sudden violence from lower class adolescents."

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*Co-variance analysis of mean changes and uncorrelated tests of significance of score deviations from the means were made as well as t-tests of mean differences. No significant differences between the groups were found.

Analyses of several items on the Inventory showed positive dispositions and changes toward learning more about lower class adolescents. For example, 90 out of 104 of the respondents stated on post-testing that they wanted to discover how "they'd feel associating with Negro and Puerto Rican adolescents" (Item 3). Another finding showed that a statistically significant number of Non-BRIDGE students shifted from "uncertain" at the pre-test to "no" on the post-test when responding to the item "People should be realistic enough to accept the fact that people like to associate with others like themselves." From the BRIDGE Group there is further particular evidence of a positive trend toward association with disadvantaged lower-class adolescents: a significant number of BRIDGE students changed from "uncertain" and "yes" to "no" when reacting to the item "I'd rather avoid trouble and stay away from lower class neighborhoods."

Overall, analysis of mean scores and item responses on the Self-Awareness Attitude Inventory showed that there were many negative feelings present among the students about associating with Negro and Puerto Rican adolescents, but positive changes over a year's educational experience did seem to take place, especially in the BRIDGE setting.

As indicated previously, the Professional Skills Checklist was employed to determine changes in confidence in working with adolescents and in the number of contacts students felt they had had with certain facets of adolescent life. As shown in Tables 10.16-10.18, none of the experimental groups changed significantly in expressed confidence; nor did pre-test or post-test comparisons between the groups related to changes in expressed confidence yield any significant differences. Analysis of the changes in expressed numbers of contacts did yield one significant within-group change. The Non-BRIDGE students moved from a pre-test mean of 14.56 to a post-test average of 16.00, a difference significant at the .05 level. However, as may be seen in Table 10.19, post-test mean differences between the Non-BRIDGE and BRIDGE students on the variable, number of contacts, did not reach significance. Thus, since neither pre-test nor post-test differences between the groups on that variable reached significance, we may not conclude that the Non-BRIDGE experience made any greater impact on students in terms of number of contacts with adolescents than did the BRIDGE experience.*

An analysis of the results of using the Queens College Adjustment Questionnaire did not reveal any significant changes in any of the groups in personality adjustment during the school year. To have entertained the possibility of change in such an inclusive dynamic as personality adjustment--at least as measured by the Questionnaire--seems in retrospect to have been unrealistic. The Questionnaire did serve a purpose, however, for it established more firmly the similarity of groups, thus making the group post-test comparison analyses sounder bases for inferring causal relationships.

The assumption that BRIDGE students would make greater positive gains in expressed leadership or nurturance orientation was not supported by the sentence completion reactions secured by the administration of the Self-Inventory on Field Experience (Table 10.21). In fact, there were no significant differences between the groups on the post-test in any of the four categories specified in the text of the report (Tables 10.22-10.23). Moreover, none of the apparent changes within groups reached statistical significance in the four categories where responses to sentences were combined (see footnote to Table 10.21 for explanation). However, where the responses to each sentence were analyzed separately, one significant finding was revealed. The Non-BRIDGE Group moved significantly away from ambivalent and nurturance responses to responses classified as self. Although responses to single sentences are generally less reliable than are combinations of similar responses to more than one sentence, the within-group difference ($df = 2$, $X^2 = 11.31$) was significant at the .01 level, thus suggesting the possibility that the Non-BRIDGE experience leads to greater self-orientation rather than orientations that are ambivalent or nurturant.

It should be noted that the above significant difference in the Non-BRIDGE students, the majority of whom had their field experience in middle class settings, was not found in the Non-BRIDGE Lower Group. The probability that both BRIDGE and Non-BRIDGE Lower placement settings offered greater opportunity for nurturant behavior gives logical support to the suggestion that the Non-BRIDGE experience tends to move student leaders away from rather than toward nurturance orientation.

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*Co-variance analysis of mean differences and uncorrelated tests of significance of score deviations from the means were made, as well as t-tests of mean differences. No significant differences between the groups were ascertained with these formulae.

Findings Related to Grades and Retention in Education Courses

Chi-square and t-test comparisons (see Tables 10.24-10.29) of grades and retention rates in education courses of BRIDGE students as compared to the other sample groups yielded two major findings; those students in the after-school placements received significantly higher grades in Education 14, and a greater proportion of the BRIDGE Group continued in the Education sequence through Education 51 (GENERAL METHODS OF SECONDARY SCHOOL TEACHING). Both of these findings are in the direction hypothesized.

Education 14 is the second semester in the PSYCHOLOGY OF THE ADOLESCENT STUDENT course and is the semester in which learning theory, classroom management, and evaluation are emphasized. This content emphasis seems more related to the study-help activities of the after-school program than to the activities in the agency placements, and perhaps that relationship helps account for the group difference in grades. Perhaps, too, the higher grades in Education 14 achieved by the BRIDGE Group provided the greater motivational force necessary to carry them farther through the education sequence. Certainly, both the findings regarding grades as well as retention have logical as well as statistical bases.

As will be seen by referring to Tables 10.24-10.28, there were no significant differences between the BRIDGE Group and Non-BRIDGE and Non-BRIDGE Lower students in grades in either Education 61 or student teaching, or in retention rate in student teaching. Nor did analysis of specific ratings by supervisors of student teachers on the eighteen-item Confidential Rating for Student Teacher Questionnaire (see Appendix D and Table 10.30) yield significant differences between the BRIDGE and Non-BRIDGE Groups. The apparent difference between BRIDGE and Non-BRIDGE students in retention through student teaching

(82 percent to 71 percent, respectively), also did not reach statistical significance.

Some Supplementary Findings

At the end of the course THE PSYCHOLOGY OF THE ADOLESCENT STUDENT, the education student is asked to evaluate his field experience on the Field Placement Questionnaire (see Appendix D). The results of the administration of that questionnaire to the study sample groups verified previous assumptions that as compared to Non-BRIDGE students generally, BRIDGE students were more frequently sole leaders of their groups, more often had groups of twelve or less in number with which to work and were less likely to have lived in a community similar to the one to which they had been assigned than the agency-placed students. Other results indicated that the BRIDGE students had conferences lasting a half hour or longer more often than did students in the Non-BRIDGE Groups.

Further, analysis of responses to the Field Work Questionnaire yielded evidence that BRIDGE students took longer than Non-BRIDGE and Non-BRIDGE Lower students to become sure of their placement role. That this process was a longer lasting and evidently deeper problem for students in the BRIDGE setting was found in analysis of the amount of time the students felt it took before their roles were clear. A similar finding was uncovered by analysis of the topics discussed in the student-supervisor conferences, which in the after-school situation were more likely to be related to understanding one's role in the placement. These findings do reflect, of course, the difficulty of reconciling and merging the roles of tutor, counselor, and learner inherent in the after-school responsibilities of BRIDGE students. The conclusion should not be drawn from this data, however, that this apparent difficulty in role identification inhibited ultimate sound professional development. It may be that such reconciling, though perhaps somewhat anxiety provoking, leads to greater depth in understanding the role of the teachers.

The analyses presented thus far in this chapter have concerned generally group changes. Although the correlated statistical analyses reported do take into account individual movement more than do uncorrelated methods, in final mathematical resolution these formulae still are most concerned with group rather than individual changes. A look therefore at the percentage of individual students who made any response changes from pre-tests to post-tests in some of the categories might be elucidating. For example, 81 percent of all students made changes in ranking the social class setting in which they wanted to teach; 67 percent changed their rank preferences for type of child they wanted to teach, mostly away from handicapped children; 30 percent of the students moved from "no" to "yes" or "yes" to "no" on the question of whether teaching was their first choice; and 77 percent made different rank choices from pre-test to post-test in places they wanted to teach.

It seems that much individual change beyond chance fluctuation probably took place during the period between pre and post testing. This suggests that even though some of the group changes were not statistically of the magnitude predicted in terms of certain specific goals, professionally desirable, much went on psychologically in the students. Greater counseling efforts on the part of the college instructors and placement counselors, if not leading to greater numbers of potential teachers who wanted to teach the disadvantaged, might lead to decisions by the students that are more firmly based in realistic considerations. In other words, even if the education sequence or any part of this sequence failed to produce more teachers for the disadvantaged, at least those who did eventually teach these youngsters probably would be more permanently committed.

Summary of Findings and Recommendations

The contradictory evidence collected in this investigation does not support the general hypothesis that the BRIDGE after-school experiences had greater positive influence on secondary education students than did the Non-BRIDGE or Non-BRIDGE-Lower agency experiences; however, neither would the findings support an opposite contention that Non-BRIDGE and Non-BRIDGE-Lower placements were more efficacious. The only general conclusion possible seems to be that in some respects the BRIDGE experience appeared more effective, in others the Non-BRIDGE experience seemed superior. Clearly, few if any of the changes manifested by the experimental groups can be classified as dramatic psychologically, at least not in terms of the goals and measuring instruments in this study.

One of the major hypotheses in this investigation was that a greater number of BRIDGE students would make preference changes in the direction of teaching disadvantaged, lower class, and Negro and Puerto Rican youngsters than would students in the Non-BRIDGE and Non-BRIDGE-Lower groups. The data collected do not support that hypothesis . In fact, according to the questionnaire utilized,none of the groups changed significantly in the direction of teaching the disadvantaged. Moreover, none of the groups changed significantly in respect to wanting to teach in New York City public schools, in preferences for "progressive" situations, or in preferences related to teaching the intellectually handicapped. Generally, the overall findings suggest that regardless of field experience settings student resistance to change in teaching choice favoring the middle class are very strong, and that some modifications in the present teacher education program are necessary if the goals implied in the above hypothesis are to be attained.

A second major hypothesis that there would be greater gains in the BRIDGE students' attitudes toward disadvantaged youngsters, social class understanding, professional skills, and leadership and nurturance orientation than there would be in the other experimental groups was partially supported by the results in this study. The data concerning changes in attitude toward the disadvantaged, while not statistically showing the superiority of the BRIDGE experience, did at least suggest the possibility that the after-school centers provide more fruitful situations in terms of desirable attitude change. Interestingly, analyses of specific items showed that significant positive changes in attitude toward Negroes and Puerto Ricans were taking place in all sample groups even where total group scores in attitude did not change significantly.

All groups made significant gains in social class understandings, at least as measured by the instrument employed in this study. The Non-BRIDGE and Non-BRIDGE-Lower Groups made significantly greater gains than did the BRIDGE Group, however. It seems that the agency type experience offers greater opportunity to learn about the dynamics of behavior as related to social class. The survey utilized to measure changes in expressed professional skills, while not yielding evidence showing positive group changes in confidence related to working with adolescents, did suggest the possibility that the agency experiences offer opportunity for greater variety of contact with adolescents than did the BRIDGE setting. None of the changes in leadership and nurturance orientation as measured by a sentence completion inventory, reached statistical significance in any of the experimental groups.

The hypothesis that BRIDGE students would achieve higher grades in education courses than would the other groups was partially supported by this investigation in that grades in one semester (Education 14) for the BRIDGE Group were significantly higher than grades in the same course for the students in agency placements. The study of respective group retention rates, while not supporting the assumption that BRIDGE students would more likely continue the teacher education program through student teaching, did show that significantly more BRIDGE students continued in Education 51, the general methods course taken subsequently to or in conjunction with Education 14. This is an important finding suggesting a motivational carry-over effect on the part of the BRIDGE experience not present in the Non-BRIDGE settings.

Certainly, an overall estimate in terms of the above findings related to the impact on students of the after-school program as compared to agency placements gives support to the feeling that the BRIDGE experience is at least as effective as the others. The present investigators feel that if possible the BRIDGE field placements or placements similar to them should be reactivated as an adjunct to the course THE PSYCHOLOGY OF THE ADOLESCENT STUDENT. The very positive comments by supervisors, the data from the Student Field Work Questionnaire, which indicated that favorable leadership, supervisory, and small group conditions were present in the BRIDGE centers--and the findings related to grades and retention of students in education classes support this recommendation. This is not to suggest that the writers of this report feel that the BRIDGE after-school program had optimal impact on the education students involved. Obviously, it did not, at least in terms of the criteria noted in this report.

This study, as others before it, reaffirms the need for specific validation of instruments before they are employed for purposes of evaluation. Many questions need to be answered. For example, how do social class understanding scores correlate with student field work ratings? Do positive student changes in attitude scores correlate with performance in the field, or in class work, for that matter?

Or, just what is meant by "social class understanding" and are the education classes or field experiences actually providing the kind of experiences that would allow for its growth? These and a host of other questions must be answered before a really meaningful evaluation of field experiences, BRIDGE or otherwise, can be effected. Although time factors inhibited certain preliminary validation procedures from being effected before this study, the data collected in this investigation could effectively serve as bases for the development of conceptually valid, useful instruments. The writers of this report hope that funds will be available for that purpose.

The present writers feel that in future researches which evaluate field experiences, much more energy should be expended in observing students in actual placements, and in notating and analyzing relevant student behavior while it occurs and while it is changing. In addition to hypotheses concerning attitudes and understanding, such questions as whether the locale and general character of the field placement (i.e., public school or community agency placements) is more important in determining the eventual teaching preference than is the make-up of the youngsters with whom the education student actually relates should be studied further. Pre and post testing of many variable changes, such as the testing effected in this study, probably does not by itself allow for a really clear understanding of the dynamics of field experience and therefore does not yield the kind of evidence from which revealing conclusions may be drawn regarding the process aspects of field placement.

In any case the reader should keep in mind that the findings in this investigation should be evaluated in terms of the particular samples studied, instruments and procedures utilized, and scope and limitations previously discussed. Viewing this study as exploratory will allow the acceptance of some of its findings without inhibiting development of more definitive hypotheses and procedures to be utilized in future studies. It should be understood that any really meaningful evaluation of field experiences such as described in this study must await an appraisal of how well the students exposed to these experiences eventually perform these tasks as teachers, what youngsters they choose to teach, and how long they remain as teachers. Finally, it is hoped that the education faculty at Queens College, which has great commitment to field work generally, and to field experience as an adjunct to its educational psychology courses, specifically, will commit itself to fully evaluating the actual results of such experiences. Perhaps the experience of this study can facilitate that endeavor.

Part IV

DEPARTMENTAL PARTICIPATION IN THE PROJECT

Chapter 11

The Teacher Education Program and Project Activities

The planners of the BRIDGE Project assumed that their investigation might lead ultimately to some modifications in the teacher education program in order to make it more relevant to the needs of those preparing to teach the educationally disadvantaged. Such changes are, however, exceedingly complex social phenomena and cannot be brought about merely by administrative fiat. What happens in a classroom, whether it is located in an elementary school, a high school, or a college, is a result of the interaction of specific teachers and pupils. They bring to the situation the total of their learning in the past. A program is modified only when behavior in the classroom changes.

The liberal arts colleges of The City University are the major source of teachers for the New York City public school system. At Queens College several thousand students are at some stage in the preparation for teaching. More of the total student body will go into teaching than into any other occupation. At the present time about three hundred students are graduated each year prepared to teach one of the secondary school subjects. They receive New York State Temporary Certificates and the majority of them take the examinations which lead to licensing in the New York schools.

The education of teachers for secondary school teaching can be divided into three kinds: general liberal arts courses, courses in their specialization, and professional or "education" courses. In a very realistic sense all 700 members of the Queens College instructional staff are preparing teachers. However, the Department of Education is primarily responsible for inducting them into the knowledge, skills and understandings which are directly applicable to their classroom performance. There are about forty members of this department who are either directly or indirectly concerned with the preparation of teachers for teaching a secondary school subject.

Course titles will give only a gross outline of what is planned for the students. At Queens College, those preparing to teach in secondary schools begin with a course entitled CONTEMPORARY EDUCATION: ITS PRINCIPLES AND PRACTICES. In this course, students examine some of the philosophical and social foundations upon which the public school system is based. Their classroom discussions and study are supplemented by field trips to the various types of schools in New York City. In their next course, called PSYCHOLOGY OF THE ADOLESCENT STUDENT, they study adolescent growth and development, mental health and hygiene, and the theories of learning that apply to classroom practices. As part of this course, the students are required to spend a two-hour period each week working with adolescents in various kinds of youth-serving agencies (see Chapter 10). In the final stage of their preparation, they study the specific methodology of their chosen specialization (science, mathematics, social studies, art, music, etc.) and spend a major portion of their time in classroom observation and practice.

Within the general outline of these titles, great variation is possible. Although some agreement among the instructors of the same courses concerning what content shall be taught is necessary, only limited uniformity can--and should--be expected in this endeavor. Each instructor brings to his teaching unique commitments, interests, experience, and competencies which it would be tragic to ignore. As highly educated and widely experienced teachers, the faculty members of the Department of Education have firm convictions about the educational process. Consequently, they reserve to themselves the right to determine in detail what goes on in their classrooms.

In view of this individualistic practice one can readily see that change can only come when an instructor decides, out of his own convictions, that change is necessary. The basic plan of the BRIDGE Project Committee was to enlist the cooperation of as many of their colleagues as could be supported by the resources of the Project. The following pages describe in detail some of the efforts that were made to make it possible for them to investigate the problems of teaching the educationally disadvantaged, to test their ideas, and to draw conclusions from observation and participation.

Staff Participation in the BRIDGE Project

The Committee presented its plans to the Secondary School Education Committee and reported its progress to this group throughout the four years of the Project. The following summary shows the many ways in which the staff was involved and the impact that the Project had on the College Program.

1. Participation in the After-School Project. This activity, described in detail in Chapter 10, included most of the staff members teaching the adolescent psychology course. Participating instructors taught classes which included both experimental and control group students during the systematic evaluation of the centers. In addition, many of the instructors used in their classes--and continue to use--the booklet Bridges to Slum-Ghetto Children published by the Project. This booklet, prepared from the reports of undergraduates, contains descriptions of reactions to their experiences in the after-school centers.

2. Staff Observation of the School Project. Staff members of the Education Department were invited to visit the classes and attend the case study conference at the junior high school. Many took advantage of this opportunity during the three-year period. The more intensive participation of three of the instructors will be discussed below. (See section entitled Consultants.)

3. Use of BRIDGE materials in the Methods Classes. A second publication of the Project, entitled Learning to Teach in Difficult Schools, was used in courses in general methods of teaching in the secondary schools. This booklet, a collection of materials drawn from the records of the School Project, highlighted the problems of beginning teachers and some of the activities of the Project designed to assist them. Instructors in the general methods courses, who had read the first draft of the booklet and made helpful suggestions for its revision, were given copies of this publication and also of test results, case study reports, samples of children's work, and lists of books used in the Project classes. The College students found this material stimulating and helpful. Instructors of social studies methods also used BRIDGE material as

samples of classroom units appropriate for culturally deprived children. The Squanto and Frederick Douglass work sheets (See Appendix B) were shown to the students. Students were also given copies of three American history unit plans prepared by the social studies teacher.

4. Use of the School Project Staff in the College Classes. Instructors of methods and student teaching invited the Project teachers and coordinator to speak to their classes on various occasions. Some of the topics that were discussed were establishing routines and maintaining discipline; teaching reading in other subject areas; and selecting meaningful content and materials. The school coordinator and teachers also spoke in several graduate classes and in the summer workshops. One of the Kornberg Memorial lecture series* for graduate students was presented by the BRIDGE school staff.

5. Observation and Student Teaching in Project Classes. As part of a program of observation of secondary schools before doing student teaching, students in the secondary methods classes spend one-half day a week for six weeks as participant-observers in a junior high school. A large number of students from the methods classes were assigned to the Project junior high school for this purpose. They participated not only in the regular classes but also in the BRIDGE classes. In addition, they worked with the coordinator and teachers in selecting and preparing materials.

After the first year of the Project, student teachers were assigned to the BRIDGE teachers. The use of student teachers was not originally planned, because of the inexperience of the BRIDGE teachers and because of the additional work connected with the Project. However, when the teachers expressed a desire for student teachers, it was decided to assign one or two a semester. The College supervisors of student teaching profited by being able to observe the Project, and the student teachers were unanimous in their praise of the Project and of the valuable and rich experience they received (see Appendix G).

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*A series of lectures given in the spring of 1964 to honor the memory of Dr. Leonard Kornberg.

Staff Consultants

Mathematics and English consultants. Two members of the secondary school education staff, one a teacher of methods in mathematics and the other in English, worked for one semester each in the Project classes. They visited the classes once a week and conferred with the teachers and supervisor. The purpose was two-fold: to make it possible for these instructors to observe the particular problems of the teachers and students in an underprivileged school and to give the teachers the benefit of their special abilities in teaching the subject. These two instructors suggested materials and helped the teachers to analyze children's needs and problems. At the end of the semester, these consultants made reports to the Committee. The following excerpts from these reports include general recommendations for teaching underprivileged children as well as comments on their experiences in the Project school.

> Mathematics. These disadvantaged children do not always share the desire for high grades that motivate children of middle class homes. Because of past failures they are convinced by junior high school that school holds little value and few satisfactions for them. There is little desire to overcome their past failure in mathematics. A teacher of these children must not only be well trained in mathematics and methods of teaching, but she must genuinely care for the children and be eager to help them learn.
>
> Because of the specific individual mathematical needs, it was necessary to provide for a good deal of individualization and small-group instruction. We found that these children could learn to work in groups and that this had numerous advantages. It provided for differentiation of assignment, and it developed responsibility and leadership.
>
> A wide variety of material was employed by the teacher: games, program books, puzzles, flash cards, and manipulative devices. Since it is impossible to know in advance which device might help a particular student, a kind of "buckshot" approach was used. Whenever possible, mathematics was correlated with science and social studies and trips were arranged which broadened children's experiences.

> Because of the teachers' concern and encouragement, the children gradually overcame their fear and bit by bit began to experience success. The level of interest was raised, and curiosity and questioning increased. Much research is in progress on the teaching of mathematics and perhaps in a few years there will not be as great a deficit in junior high school. Meantime the teacher must have faith that blocks due to past failures can be overcome and patiently, with the best materials available, help each child learn at least the fundamentals needed for his daily life.
>
> English. A conflict often arises between the middle-class teacher and the lower-class student when the teacher attempts to correct the common parlance of the neighborhood. In writing, spelling, punctuation, and grammar, we are holding up models that are treasured by most middle-class whites but not always by lower-class Negro children. Teaching of English in these schools then is a tremendous challenge.
>
> A major difficulty seems to be lack of clarity of goals. Is the goal preparation for academic high school, social competence, or self-understanding? A teacher probably needs to be working for several goals concurrently--for surely they are not exactly the same for each child. But there must be some clear-cut objectives that are achievable and teachers must be helped to set the goals and plan ways of achieving them. Although group work will enable greater opportunity to diversify the work, it is essential that it be well-organized and orderly. This demands calm, unhurried, and detailed attention by the teacher.
>
> In teacher preparation for these schools, it would seem that the psychology and sociology classes should not fail to include a study of "slum" areas and their effects on children, that special methods classes should emphasize work with the uninterested and disenchanted child, and that the students should become acquainted with adolescent literature that is particularly appropriate for these children.

Art and Music consultants. The original Project plans did not contain any reference to the non-academic subjects, such as art and music, taught in the junior high school. The Project teachers taught only the four major subjects. Although the children attended the full school program, no attempt was made to evaluate their experiences outside the Project classes. However, it was the belief of the Committee that manual-type activities would be of value to the youngsters and that the Project teachers should include such activities in their classes whenever it seemed feasible. Little of this was accomplished, since the three teachers lacked experience in relating manual arts to their subject areas. Although some projects were attempted during the first two years, the teachers, amazed at the low level of ability of the students, felt that they had neither the time nor the ability themselves to help them do anything beyond the routine things attempted in every classroom.

During the ninth grade, it was decided that an attempt could be made to introduce art activities into the Project by helping the teachers plan and carry out such experiences with the children. As it actually worked out, the student teacher working with the social studies teacher carried out the most extensive project. Since they were just beginning a unit on Africa, the College instructor of methods of teaching art agreed to work with the teacher and the children. The children involved in this project came to school before the regular school day began and a large part of the work was done at that time. The Africa unit culminated in an assembly program in which many of the art objects were used and displayed. Music and dance were also included in the program and a College music instructor assisted in these areas.

The College art consultant also gave additional help to the teachers in other projects, such as a science unit on light in which children designed transparencies.

The following quotations from the art consultant point to the need for further exploration of the use of art and music to reinforce academic learnings.

> In working with the BRIDGE youngsters in the correlated art projects, we observed that their reactions to these physical activities were very positive. There was no apathy. Work was done thoroughly and with care. There was a good deal of self-direction and initiative and the link between the physical and academic sides of each undertaking seemed to be understood and maintained. The BRIDGE experience would seem to indicate that the "physical" approach to at least some areas of the junior high school curriculum merits attention, probably with all youngsters, but more particularly in situations involving the disadvantaged.
>
> The author suggests that student teachers be required to participate in a core of workshop courses in the arts during their college training so that they are prepared to meet disadvantaged students at the physical level at which they are most comfortable and therefore most easily approached. Because rapport is so necessary in such situations as the BRIDGE small-school plan, relationships established beyond the academic can be invaluable. The "model" is such an instrumental force in the concretizing of one's identity that the student teacher must be trained to realize herself as being something more than a transmitter of knowledge and be given the background to be able to contact children in a number of non-academic ways. The author is convinced that once the slum-ghetto child can realize himself in a non-academic school environment, he will soon realize himself as an academic student. The student teacher must be trained to help him find the way.

The Reading Workshop

BRIDGE provided a reading workshop for secondary education staff. In the secondary school education sequence, no provision is made for instruction in the teaching of reading except the little taught in the classes in methods of teaching English. Students preparing to teach the other subjects do not have this instruction. Realizing this need, particularly for teachers in the underprivileged schools, the BRIDGE Committee decided to provide an opportunity for the College staff members to study the problem. A series of five workshop sessions was scheduled during the College inter-session of 1962 to provide background about the scope and kind of reading problems that exist in the secondary schools, and to consider ways in which all our secondary students might be given some opportunity to become aware of reading problems and to learn to cope with them.

Nine members of the secondary school education staff attended. In addition to the BRIDGE Committee, a reading specialist from the New York City Board of Education participated. During the five days several recent research studies were reviewed; current reading programs in junior high schools were described; a demonstration of a reading lesson with children in the Project school was given; and recommendations were made for ways of including reading instruction in the secondary education sequence.

Among the recommendations were: more opportunity for all students to visit reading classes and clinics; more provision for students to work as reading tutors under the direction of a reading specialist; greater emphasis on selection and approval of materials on a low reading level in all subject areas; development of more student teaching centers in deprived areas.

Several of these suggestions have been implemented. Others will be considered again when the final report of the BRIDGE Project is presented to the Department.

The workshop group concluded that it would be desirable to require all students preparing to teach academic subjects to take a complete course in reading. However, since this would necessitate a change in the total secondary curriculum, involving College and State approval, it has not been possible to date to achieve this goal. Currently all secondary education students at Queens College are encouraged to take such a course on the graduate level during their first year of teaching.*

Committee Activities

The College Committee, consisting originally of four members of the Education Department, had the greatest opportunity to develop new insights and test ideas concerning the education of junior high school pupils in depressed area schools. They engaged in many activities during the course of the Project. During the Spring semester of 1961 they planned the Project, obtained the funds, and selected the school staff and psychologist. As the plans were put into operation they supervised all aspects of the Project and became deeply involved in the search for materials and methods more appropriate for the children who participated both in the school project and the after-school Project. They were able both to attend and to hold conferences dealing with the problems of teachers in depressed-area schools. The development of testing instruments, the planning of study units, the designing of special inquiries, the participation in group study of problems, and the preparation of the many reports made imperative consistent attention to the goals of the Project and the means for achieving them. Some of their activities follow.

During the planning period of the Project, they called a conference of beginning teachers to verify some of their assumptions about teaching in difficult schools. Forty teachers, recommended by principals of schools in deprived areas, attended. In addition, four members of the Department of Education and four student teachers participated. The teachers were requested to come prepared to discuss the chief problems of beginning teachers and the kind of preparation they believed was needed for teaching educationally deprived children. The participants divided into four groups, each led by one of the members of the Education Department. After the conference, a report was prepared giving a summary of the group discussions. These summaries focused on those factors that, in the view of the conference participants, contributed to tensions in difficult schools and on the problems faced by new teachers. Many of these conclusions confirmed the Committee's assumptions regarding conditions in schools in depressed areas. In addition suggestions for school administration and organization and for teacher education programs were made. These are included in the published report of the conference.*

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* For a full report of the workshop, see "Preparing Teachers for Reading Problems in Secondary Schools," compiled by Helen F. Storen, BRIDGE Project Publication No. 2, April, 1962.

The Committee members met weekly during the four years. Frequently the school coordinator and psychologist attended these meetings. At these meetings, the budget was reviewed, the evaluation instruments developed or selected, curriculum planned and appraised, teachers' problems analyzed, and relevant research studies discussed. The Associate Superintendent of Junior High Schools, the District Superintendent. and the school Principal were invited to meetings when major problems or changes in policy were anticipated

Committee members planned an annual meeting to report to the Advisory Committee. Informal meetings were also held with the Public Education Association and representatives of the Foundation.

Once a week the entire committee met with the school staff for two class periods. One period was devoted to the Case Study (see Appendix E). The second period was devoted to the many on-going problems of the teachers. During the first and second year, many of the discussions revolved around relations of the BRIDGE staff to the administration and other staff of the school. Questions relating to students' needs and interests, and problems of discipline and classroom management were also frequently on the agenda. During the first term of the third year a series of meetings was devoted to an appraisal of the curriculum materials used. (See Appendix A for a summary of these meetings.) Considerable time during the final Spring term was given over to appraisal of the Project and to making decisions regarding future vocational plans for the children. The school guidance counselor aided the staff in helping children select the most appropriate high school.

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*See Preparing Teachers for Difficult Schools. Queens College Conference February 25, 1961, Robert W. Edgar, Editor, BRIDGE Publication No. 1

One member of the Committee worked consistently with the psychologist in planning the research and interpreting test results.

The other members of the Committee met frequently with the consultant and individual staff members. Two members worked intensively with the social studies teacher on two special projects. (See Squanto and Frederick Douglass--Appendix B.) Another member spent one morning each week visiting classes, conferring with the coordinator, and helping in the selection and preparation of curriculum materials. Various reports were made to the staff and committee regarding the students' and teachers' problems and progress during the three years.

During the four-year period, members of the Committee visited several city schools in the Gray Area Studies Project to learn ways in which these school systems were meeting the problems of teaching and learning in deprived neighborhoods. Materials were exchanged and both groups profited by the exchange of ideas and experiences.

Participants in the Project were called upon frequently to speak at professional conferences, to act as resource persons in college courses and workshops, and to participate in various community activities related to the education of children in deprived communities. Several articles were written for educational journals and books of readings (see Supplementary Bibliography).

Conclusions

It is the belief of the members of the Committee that their participation in the Project was one of the most rewarding experiences of their educational careers. Although the attempt to involve the entire secondary education staff deeply in the Project could only be partially realized, our conviction is that only through continuous participation in the public school can a college staff keep up with the mounting needs and problems of the urban schools today. The college staff that worked with the

Committee became more acutely aware of the necessity for fashioning their courses in such a way that the students would be better prepared to become effective teachers in these schools. They also saw the need for more research, exploration, and demonstration. The materials growing out of the Project have been used extensively in the classes and more staff members have asked to be assigned as supervisors and act as consultants in the difficult schools.

Part V

CONCLUSIONS AND RECOMMENDATIONS

Chapter 12

Summary: Comment and Implications

The goal of the BRIDGE Project was "to find ways of more effectively preparing teachers to work in schools in culturally deprived neighborhoods." In this chapter we shall attempt to draw together in very abbreviated form the chief findings of the study, to comment briefly on a few problems raised by the material previously presented, and to re-state what we think the implications of our findings are for the public schools and for college programs of teacher education.

The problem as seen by the planners was two-fold: how to bridge the gap between middle-class-oriented college students preparing to be teachers and lower class youth of varied ethnic background attending the public junior high schools; and, how to modify the professional courses at the College so as to increase their usefulness as preparation for meeting the problems of classroom instruction in difficult schools. This study was viewed as exploratory in nature. Its strategy was to devise means for studying pupils and teachers in a difficult school and at the same time to provide experience for undergraduates with educationally disadvantaged youth.

Two enterprises were initiated: a small-school-within-a-school where three inexperienced teachers and three classes of educationally disadvantaged youth were intensively studied for three years, and a number of after-school centers which made possible the study of the reactions of College undergraduates to their experiences with youth living in depressed areas.

The approach to modification of the teacher education program was indirect. It was assumed that the temporary assignment of members of the Department of Education to various aspects of the investigation would heighten their concern with the problems of teaching the educationally disadvantaged and would lead to consideration by the Department of ways in which the College program could be better adapted to preparing teachers for teaching such youngsters.

Detailed accounts of the activities and conclusions have been given in the preceding 11 chapters. This chapter, in recapitulating the findings, will omit the substantiating evidence and the discussion. It has two main divisions. The first division summarizes the findings concerning pupil characteristics and growth, teacher problems and growth, curriculum methods and materials, the testing instruments, and the impact of the after-school experience on undergraduate students. The findings are in the form of a series of statements which the Committee feels are warranted by the evidence and relevant to the concerns of those studying the problems of teaching in difficult schools. The other division of the chapter contains the recommendations of the Committee both for modification of the College courses and for changes in policies and practices in the public schools.

The School Project

Pupils' Characteristics and Growth

In order to carry out its plans to study the characteristics of "educationally disadvantaged" children, the Project Committee selected a junior high school which was designated as a "Higher Horizons" school by the Board of Education of New York City. The children of these schools as described by Jacob Landers, coordinator of that program (21), live either in slum areas or on the edge of them; they come from low income families without an educational tradition; many of them are members of families receiving Welfare assistance; most of them receive free lunch; a high proportion of them come from broken homes. They go to schools that are characterized by high transiency rates and have a median retardation of about one-and-a-half years in reading and arithmetic. The junior high school selected by the Project Committee was in a slum area of Queens and its pupils had the characteristics enumerated above. Its transiency rate was, at the inception of the Project, the highest in the Borough and the children entering the seventh grade in September 1961 were about two years retarded in reading and about one-and-a-half years retarded in arithmetic (see Appendix C, Table 8.3). Though the entering seventh grade cannot be considered a random sample of the total population designated as "educationally disadvantaged" in the City, it appears to have typical characteristics and to be representative of that group.

Intellectual Functioning. On the basis of the Project records and experiences, the following statements can be made about the intellectual functioning of the entire seventh grade:

1. In IQ, the children's means were initially close to 90, a score which corresponds to a percentile rank of 25 in the original normative population. Approximately half of them, in terms of IQ, were within or slightly above the average range. The other half fell within the classification "dull normal" or below. It is probably only those below 90 IQ whom most educators have in mind when they speak of the "educationally handicapped" or "culturally deprived" child. The presence of the upper half of the group should not be overlooked.
2. On the sub-scores of the Wechsler Intelligence Scale for Children, the pupils in this study did poorest on Vocabulary and Information, two tests which appear to be most closely related to educational experience and cultural opportunity. The sub-score results also revealed that these children show greater competence in dealing with practical situations than with abstractions.
3. However, the achievement on the Performance part of the Wechsler Scale was very little better than on the Verbal part. Our study does not substantiate the general impression that cultural deprivation is primarily manifest in lack of verbal skills. The impoverished experiential background appears to affect performance almost as much as verbal abilities.
4. Factor analysis of the sub-tests of the WISC leads to the conclusion that the basic factors underlying the intellectual functioning of these children are similar to the factors underlying the intellectual functioning

of the standardization population. The interrelationships among the factors are slightly different. In this population perceptual organization seems less closely related to academic abilities than in the standardization population.

The previous statements are based on the analysis of the test results. The reports of the teachers supported and supplemented the general picture of retardation in intellectual development. The teachers commented on the unusual lack of general information and the limited vocabularies of the children. They reported that many of the youngsters did not seem to know such distinctions as the difference between a city and a state, east and west, a robin and a sparrow, a daisy and a violet. The teachers described many of the children as sadly deficient in verbal skills. This was manifest in their practice of responding to the teachers' questions with monosyllables or with short and incomplete phrases. The teachers stated that the writing of the children was filled with errors which indicated little understanding of phonics, word structure, spelling, usage, or proper word and sentence order.

Personality. The picture of the emotional development of the children that came out of the study had both negative and positive aspects. The series of personality tests and the comments of the teachers revealed a group of children who were on the whole less mature and less self-controlled than one might expect of their age group. However, not all comment was negative, for both test results and teachers agreed that these children seemed somewhat more sensitive to and knowledgeable about human interrelationships than other children of their age. The following statements summarize the findings:

1. The Rosenzweig Picture-Frustration Test indicated that the Project children avoid blaming themselves in responding to frustrating situations. They are likely to hit out in aggressive fashion or to try to explain away the situation. This test also showed that these junior high school pupils seemed to approximate more closely the normative pattern of third graders than

they did a group nearly their own age. This contrast suggested a marked degree of emotional immaturity.

2. This impression of widespread immaturity was corroborated by the teachers. They reported that the children were unable to wait any length of time for the satisfaction of their needs. What the children wanted, they had to have immediately; what they wanted to do, they had to do right away.

3. The teachers also reported that this immaturity was manifest in an unusually strong and insistent demand for praise. The behavior of these youngsters had a marked resemblance to the sibling rivalry of small children in the home setting. Being constantly solicited for approval, the teachers had to discover ways of conveying it to each pupil without surrendering to the unspoken demand that the approval not be shared by the others.

4. The Rorschach Ink-Blot Test added further corroboration to these findings. Analyses of responses to this test indicated that the Project children, when compared with a group of white upper-middle-class boys and girls of approximately the same age, were less mature, less controlled, and less accurate intellectually. However, since the comparison group was substantially higher in intelligence scores, the contrast may have simply reflected differences in intellectual abilities.

5. These children seemed very conservative. When the teachers attempted to modify classroom procedures, they met resistance. The pupils did not like to change their seats; they preferred to be taught by the methods they were used to; they wanted the individual ownership of school materials and equipment clearly established; they resisted methods of teaching which emphasized

sharing and cooperation; they were worried when they were not taught what others at their grade level were taught. The Project staff interpreted this conservatism to be a manifestation of insecurity.

6. These pupils had very limited group skills initially. They were seldom able to assume individual responsibility and were unwilling to work in groups. Their orientation was, as far as study was concerned, exclusively toward the teacher and not toward their classmates.

7. The most positive finding of the tests and of the teachers' observations of the children was that they were very much interested in people. The results of the Rorschach suggested that they were more responsive to social stimulation and more sensitive to the details of social situations than the white upper-middle-class boys and girls with whom they were compared. The teachers reported that they were more interested in people than in abstractions. The teachers felt that the youngsters were keenly sensitive to the feelings, motivations, and thoughts of those around them, especially their parents or guardians, teachers, and classmates.

8. The teachers also reported that the children were interested in the human body, especially in its illnesses, and in matters of race, mystery, adventure, odd and unusual events, and dramatic action.

Though most of these children were grouped in the lower classifications on intelligence and achievement tests, the teachers felt they were capable of substantial growth. The following brief statements about the children in the special Project classes are based on the testing program as well as on observations.

1. In the interval of approximately two and one-half years between administrations of the Wechsler Intelligence Scale for Children,

the Project children raised their mean Full Scale IQ's over five points. Slightly more than four out of five children made some gains and one out of five gained more than ten points.

2. In the interval of approximately two years and eight months between the initial and final administrations of the Metropolitan Achievement Test, the Project children gained on the average slightly less than two years.
3. The ability of most of the children to speak more fluently increased noticeably. Though the majority answered questions in one word or in a single phrase at the beginning of the study, they were able to carry on more sustained discussion, to speak in longer sentences, and to describe more accurately and with more continuity by the end of the study.
4. Interest in learning increased. At the conclusion of the study pupils were asking many more questions both for clarification and for additional information.
5. Ability to reason and to think critically improved.
6. Attitudes toward written assignments and tests became more positive, resulting in improved performance.
7. Voluntary reading, especially of magazines, increased.

Evaluation of the Tests

In addition to studying the children, the Committee was interested in evaluating the instruments used for determining their intelligence. During the past two decades, criticism of the use of group intelligence tests with culturally deprived children had reached the point where the New York City schools abandoned their use of such tests. Since the Project design called for two administrations of an individually administered intelligence test, separated by two-and-one-half years, it offered an excellent opportunity to reach some conclusions about the group intelligence tests. The following statements are a recapitulation of the analysis in Chapter 9.

1. The drop in IQ from beginning to end of elementary school which had often been noticed among children of this type in New York turned out to be mainly an illusion, created by the use of an unsuitable test in the sixth grade. As measured by the Cattell Culture-Fair Intelligence Test, Scale 2 (a group test in the eighth grade) and the Wechsler Intelligence Scale for Children (an individual test) in the ninth grade, the IQ's of this group of children were approximately equal to what they had been in the first grade as measured by the Pintner-Cunningham Primary Test (a group test for children in the kindergarten and first and second grades).
2. Of the intelligence tests studied, the most valuable was the Wechsler Intelligence Scale for Children, which had both a high correlation with initial achievement and a substantial ability to predict gain in achievement over the three-year period.
3. Of the various group tests that were studied, the one that made the most favorable showing was the Cattell Culture-Fair Test, which, though it did not correlate so well as the WISC with achievement at the beginning of the study, did correlate with gain during the Project practically as well as the WISC did; it also seemed relatively free from cultural bias.
4. Both the Pintner General Ability Test given in the eighth grade and the Otis Beta given in the sixth grade correlated more highly with achievement than they did with the other intelligence tests and the mean IQ's achieved on these two tests were lower than those achieved on the other intelligence tests. These two tests seem less suited for use with educationally disadvantaged children than the other tests used.

5. The Pintner-Cunningham Primary Test, formerly given in the first grade, and the Otis Quick-Scoring Mental Ability Test: Alpha, Short Form, formerly given in the third grade, showed up rather well in this study. The Pintner-Cunningham not only did not seem to put this group at a disadvantage as compared to the other IQ tests when means were compared, but also had a substantial correlation with achievement at the beginning of the seventh grade despite the six-year interval. The Otis Alpha in the third grade provided a mean IQ which was practically identical with the mean IQ of the WISC in the seventh grade, and also had a substantial relationship to seventh grade achievement. It is the judgment of the Committee that these two tests, neither of which requires any reading, could serve useful guidance functions in the elementary school even with educationally disadvantaged pupils.
6. In regard to the prediction of gain in achievement over the three years, initial achievement was found to correlate slightly less well with gain in achievement than initial intelligence did. With both the WISC and the Metropolitan Achievement Tests, a weighted combination of the best sub-tests produced higher predictive correlations than did the total scores on these tests.
7. Prediction of gain in achievement was not materially improved by the use of projective measures of personality such as the Rosenzweig Picture-Frustration Test and the Rorschach Ink-Blot Test.
8. Factor analysis of the WISC results revealed a general verbal academic factor and two special factors, one centered in tests involving perceptual organization and the other apparently one of number ability.

9. Factor analysis of the Metropolitan results revealed that it was primarily a measure of general achievement. Three minor additional factors were noted, one centering in those tests in which reading comprehension is important, another centering in the two arithmetic sub-tests, and the third centering on vocabulary.

10. Factor analysis of the WISC and the Metropolitan scores combined revealed substantial commonality between the two instruments, which may be general intelligence or aptitude for school learning. However, two special factors in the WISC and two in the Metropolitan, which had been identified in the separate analyses, reappeared with practically no overlap.

The Impact of the Small-School-Within-A-School

The design for testing the impact of the small-school-within-a-school on the children called for the comparison of gains in intelligence test and achievement test scores of the experimental or "Project" group with a Control group consisting of all the other children at the same grade level in the same school. In achievement a comparison was also made with a second control group drawn as a random sample from the population of a similar school in Manhattan.

This testing program consisted of two administrations of the Wechsler Individual Scale for Children to the Project Group and the first Control Group at the beginning of the study and near the end, an interval of approximately two-and-one-half years. The Metropolitan Achievement Test was administered four times to the Project Group and the first Control Group, once at the beginning and at the end of each academic year. Four parts of the Metropolitan were administered to the second Control Group at the beginning and end of the study. The following is a summary of the analysis of gains:

1. The Full Scale IQ for the entire seventh grade was 89.01 as measured by the Wechsler Intelligence Scale for Children. This

was at the upper limit of the "dull normal" category.

2. When boys and girls were considered separately, the Project girls were seen to have been about five points lower than Project boys, Control boys, and Control girls. This divergence was slight at the beginning of the Project but became larger as about one-third of the population gradually left the school.

3. On the retest of the WISC in ninth grade, the Project boys were 8.50 points higher than the Control boys in Verbal IQ, a very significant difference, and 4.22 points higher in Full Scale IQ, a probably significant difference, while the difference of 1.59 points in Performance IQ in favor of the Control Group is not significant.

4. The Project boys gained 6.25 points in Verbal IQ while the Control boys gained only 0.28 points, a statistically significant difference.

5. The Project boys gained 5.32 points in Full Scale IQ as compared to 1.78 points for the Control boys, a statistically significant difference.

6. Equal gains were made in Performance IQ by the Project boys and the Control boys.

7. The Project girls gained 3.00 points in Verbal IQ as compared to 1.17 points for the Control girls, a difference not fully meeting the test for statistical significance.

8. The Project girls gained 4.38 points in Performance IQ as compared to 1.93 by the Control girls, a difference not fully meeting the test for statistical significance.

9. The Project girls gained 4.27 points in Full Scale IQ compared to 1.81 points by the Control girls, a difference not fully meeting the test for statistical significance.

10. The consistency of the trend in the previous three statements would indicate that it is highly unlikely that the differences are due to chance fluctuations.

11. The total Project Group, both boys and girls, gained 3.87 points more in Verbal IQ than the Control Group, 2.26 points more in Performance IQ, and 3.29 points more in Full Scale IQ. The differences in Verbal and Full Scale IQ are highly significant. The differences in Performance IQ have a probability of less than 10 percent of arising by chance.

12. If the scores on the Verbal Test of the WISC are divided into three groups, 95 and above, 85 through 94, and 84 or below, the results indicate that among the boys there was a fairly consistent gain regardless of initial IQ level. Among the girls, gains in IQ were found at the low and middle levels, but neither Project nor Control girls of initially high IQ showed any mean change.

13. Large gains in IQ (of 10 or more points) were made by a substantially higher proportion of the Project Group than of the Control Group. In verbal IQ 21 percent of the Project Group gained 10 or more points as compared to 7 percent in the Control Group. For Full Scale IQ, the percentages were 21 percent Project as compared to 4 percent Control.

14. The mean achievement level for the entire seventh grade at the time of entry into the school was at the beginning of fifth grade as measured by the Metropolitan Achievement Battery, Intermediate, Complete, Form A.

15. The progress in achievement as measured by the Metropolitan Achievement Tests showed no statistically significant differences between the Project Group and the Control Group within the same

school. In the two years and seven months intervening between the initial and final administration of the Metropolitan, the Project Group gained 1.90 years; the Control Group, 1.98 years. The difference is not statistically significant.

16. Both groups seem to have made their best gains during the first year. Analysis of the results of annual administrations of the Metropolitan revealed that the Project Group made its smallest gains in the second year; the Control Group made its smallest gains in the third year. The improvement in the third year in the Project Group was in agreement with staff opinion that the second year was the low point of the Project, with considerable improvement in the final year.
17. A second Control Group (II) was given four sub-tests of the Metropolitan at the beginning and end of the Project. When the gains in this group are compared with the gains by the Project Group and Control Group I, they show that both groups in the Project school surpassed the Control Group II by more than 4 standard score points, a statistically significant difference corresponding to nearly a year in grade score.
18. When gains in achievement on the Metropolitan are analyzed according to IQ level (below 85, 85-94, 95 and up) size gain is seen to be related to initial ability. The "low" IQ groups gained least, the "middle" IQ groups gained more and the "high" IQ groups gained most.

The present study has demonstrated that early adolescence is not too late to induce a favorable change in measured IQ. The Project children showed improvement, particularly in Verbal IQ, that is educationally as well as statistically significant. The improvement was most striking among the Project boys, one-third of whom showed verbal IQ gains of 10 or more points. The reason for the marked improvement of the boys is obscure. It may be that in the beginning these boys were more alienated from teachers than the girls were, so that a three-year effort to establish a meaningful relationship with them may have had more room for improvement with the boys.

Teachers' Problems and Growth

The central focus of the Project was on the development of professional skills and insights in the teachers. Their difficulties and development have been extensively examined in Chapters 4, 5, and 6. The following statements attempt to summarize some of their chief problems as teachers as they began and continued in the study.

1. The teachers had to develop a working attitude toward those aspects of the culture of their pupils which deviated from their own values and behavioral commitments and procedures for coping with them. The uninhibited and uncontrolled cursing, fighting, sexual interest, lack of respect for established authority and conventions and the failure to recognize the importance of the connection between school performance and adult success--all those confused and troubled the teachers. The teachers' confusion did not seem to be due to prudishness, but to their uncertainty about appropriate and realistic limits for individual and group conduct.
2. The teachers had to make radical adjustments in order to teach children who were on the average two years retarded in academic achievement and many of whom were barely literate. The college training of the teachers had not prepared them for this adjustment, nor had the school system eased their task by developing a curriculum and providing materials appropriate to the abilities and interests of children such as these. In the process of adjusting, several demands were made on the teachers.

(a) They had to modify the curriculum substantially. This meant that they had to select meaningful topics for study, to develop specific aims appropriate to the abilities and interests of these children, and to discover and obtain materials which could be used to achieve their aims.

(b) The teachers had to learn classroom techniques appropriate for these children. One of their primary adjustments was in the pace of teaching. They had to learn to proceed slowly and very systematically, with ample but meaningful repetition. They had to shift away from teaching as telling to learning as active response, even by the slowest of these children. Consequently the teachers had to develop skills in eliciting information from the pupils rather than giving it to them, in helping them to find relationships and new applications, and in devising individual and group activities which demanded that pupils reach their own conclusions.

(c) The teachers had to learn to adjust to the variety of ability levels of the pupils. They had to devise diagnostic tests to determine the levels of achievement among their pupils; they had to develop their own materials for individualization of instruction; and they had to teach reading skills. They had to learn to proceed flexibly, capitalizing on interests of children at the times when they manifested these interests rather than at logical points in the school curriculum guide. They had to learn to differentiate failures in procedures from failures in content.

3. One of the principal problems of the teachers in the early stages of the study was their difficulty in enduring the onslaughts on their physical and emotional energies made by pupils constantly testing them to see how strong they were in their ability to maintain school

and classroom behavior policy, by the demands for adjustments in curriculum content and procedure, by the criticism of the school supervisors, and by their exposure as a result of being guinea pigs in a Project.

Three years of study and experience produced substantial growth in professional understanding and skills among the teachers. This growth was revealed in their reports of their planning, in their diaries, in the material which they prepared for the case studies, and in the observations of the coordinator and the College Committee. The following comments attempt to give some picture of their development.

1. The teachers improved in their ability to plan lessons which were adapted to the interests, needs, and abilities of these children. They grew in their ability to set realistic goals and to develop clear and logical means to the achievement of these goals. They came to realize that for those children who were low in academic ability many steps in the learning process had to be spelled out in detail if concepts were to be understood, learned, and retained. They learned to use a greater variety of activities within each period, placing less reliance on "teacher talking" and class recitations. They learned to depart from their plans in order to teach something that was of immediate interest.
2. The teachers learned to use a great variety of materials and devised many of their own to meet classroom needs. They used textbooks, workbooks, audio-visual materials of many kinds, free materials from private corporations and public institutions, plays, fictional and biographical materials, diagnostic tests, individual worksheets, programmed material, and whatever could be adapted to their purposes.
3. Their teaching gave evidence of a continuously increasing knowledge of all aspects of the child's development. This was evident in the

way in which they adapted their plans to individual and group differences and in their increased ability to talk with children about personal matters. They were able to establish open and sincere relationships with the children. The children responded to this by displaying less fear of the teachers and more confidence in them. Discipline problems were by no means eliminated, but the teachers developed greater firmness and consistency.

Curriculum: Methods and Materials

The following statements report some of the findings related to curriculum and method. They are given here as recommendations to educators who are planning programs for educationally disadvantaged children.

1. Clarity of structure is a basic characteristic of successful teaching of the educationally disadvantaged. The goals of learning must be stated simply and clearly. They must be attainable. The means designed to achieve these goals must be planned in detail. Immediate rewards for successful performance by the pupil should be part of the plan. In the BRIDGE Project, this desirability of clarity of structure was highlighted in devising the Squanto and Frederick Douglass units (see Appendix B). The reading tasks were clear and specific; the tests were frequent and immediately scored; the discussion followed immediately after the testing.
2. Children with a large deficit in common knowledge and skills need to be given the opportunity to make up this deficit. They should not be expected to follow a curriculum designed for children well above their functioning level. It is essential that activities and materials be selected which will challenge but not discourage. Though tests are important means of

diagnosing ability, a teacher's day-by-day alertness to students' gaps in knowledge is also essential if appropriate learning experiences are to be planned.

3. Knowledge or skills that are considered essential must be repeated frequently in various contexts. It takes these children longer to master an idea or to achieve permanent learning of certain facts. This is probably due to the lack of reinforcing experiences outside the school. Consequently teachers should provide a saturation approach if they expect material to be mastered and remembered.
4. Opportunity should be given for more oral communication than is usually provided in today's secondary schools. Informal conversations, tape recordings, dramatizations, interviews, field trips, small group projects, all gave children experiences which apparently had not been provided in either the home or the elementary school.
5. A variety of media for facilitating instruction should be provided for these children. Classroom libraries, magazines, pictures, puzzles, and games should be in each room. Good films, film strips, and other visual aids should be easily accessible.
6. Based on the experience of our teachers, we would say that a junior high school curriculum for children in depressed areas should capitalize on the major concerns and interests of the children.
    a. Science. A science curriculum should include large blocks of physiology and biology. The lack of knowledge in these areas was surpassed only by the tremendous curiosity. The interest in disease, narcotics, pregnancy, hygiene, and weight served as a potent stimulus for learning about the body. In the physical sciences the school may need to begin with the simplest

apparatus and supplies. Apparently the little science in the elementary school was not remembered, for the children liked and learned how to operate batteries and to perform simple experiments in chemistry and physics.

b. Social Studies. In social studies the material should have a biographical or human relations slant whenever possible. The children knew very little about the Negro in history and had no background of information about race relations problems. The Project study of the Negro which was taught chiefly through biography and fiction (see Appendix B) seemed to enhance the children's self image as well as to add to their history background. All through the study of American history, the emphasis should probably be on the dramatic, colorful human events of our country. Geographical knowledge can also come from stories of places and people. Here again one must begin where the children are.

The most important change needed in both social studies and science is that the number of topics included in the usual course of study be reduced. Each theme or topic should include enough interesting supporting detail so that a child will remember it. The short encyclopedic way of teaching--so often used with slow children--is futile.

c. Literature. Stories of mystery, adventure, and sports appealed to these children. Fairy tales and folk tales were also of interest, particularly to the many children who were emotionally immature. The girls wanted teenage love stories, particularly in the eighth and ninth grade. There is now an abundance of material on low reading levels and as more and more of these books are being printed in paperbacks, schools should be able to buy them to supplement or to replace the anthologies which are often unsuitable. The books must be readily available and can be used for individual, group, or total class reading. There is no reason today to depend upon the classic literature that has often formed the basis of the course of study but which was beyond the understanding of these children of meagre background.

One of the questions under investigation in the BRIDGE Project was whether or not beginning teachers could be successful in working with disadvantaged pupils on an extensive, long-term basis. The study has shown that they can be. On the other hand it is very doubtful that every new teacher can, through training and experience, develop the understandings and skills that are necessary to work with these children, even with the best of supervision and the most adequate provision of materials and equipment. To a certain extent the desirable characteristics of a teacher for the culturally deprived are the desirable characteristics of a good teacher. However, the pressures of teaching in a difficult school are such as to heighten the importance of the following characteristics of the good teacher of the culturally disadvantaged:

1. He should be emotionally mature. He must, in effect, be a person who has attained self-understanding and a fairly firm set of values which will give direction to his work and sustain him in his difficulties.
2. He should have unusual physical stamina and be able to work harder and longer than the teacher in a middle-class school finds necessary.
3. He should have the ability to feel interest and enthusiasm for his subject and to project this interest. He must personify for these children the good results of what it means to have mastery of the knowledge and skills which he seeks to teach the pupils.
4. He should be capable of considerable objectivity, able to see the behavior of the children as symptomatic of their problems and

not as threats to his dignity. He should also be able to accept assistance and be inclined to experiment and innovate. Though well informed in his subject, he should be committed more to the teaching-learning task than to scholarly achievement.

5. He should be able to individualize his classroom procedures. If he is to do so, he will have to have some training in the techniques of individualization and must have materials which make it possible.
6. He should be able to use the arts as useful stimulants to learning the academic subjects. The Project teachers used dramatization in English and music, and art in social studies and science to increase motivation for the more usual classroom work. Two examples of this approach were the African unit in social studies and the unit on light and color in science.

The Role of the Supervisor

As the three years of the study progressed, the participants came to appreciate more and more the critical part played by the coordinator. She was in many ways the hub of the wheel in which the teachers were spokes and the pupils were the rim. She served both teachers and pupils in ways that are somewhat outside the customary functioning of the supervisor in New York City and are therefore recapitulated in this summary of findings.

1. One of her primary functions was to give the inexperienced teachers emotional support. She listened to their trials and their triumphs, reassuring them on the former and commending them on the latter. She worked with them in their classroom when the problems exceeded their abilities to cope with them. She listened in private to their dissatisfactions and complaints. Above all she stood behind them, giving them a sense that they were not alone but a part of a professional team.

2. She provided assistance in all aspects of the curriculum. Naturally she was more expert in some areas than in others. But she shared with the English, the math-science, and the social studies teachers the quest for materials and methods which could be adapted to pupils' needs. Occasionally she brought in subject-matter specialists to give expert help in specific areas.
3. She assumed responsibility for the professional development of the teachers. She held individual and group conferences in which she helped the teachers develop realistic goals, construct and reconstruct viable lesson plans, and analyze pupil difficulties. In some instances she taught them in straightforward fashion skills which she had mastered in her own professional career.
4. She assumed some general counseling functions. She helped the teachers understand the general functioning of the children in their classes, collected and helped interpret the data which the school had accumulated on these children, and assisted in devising classroom approaches which might reach these children more effectively. When expert services were needed in this area, she enlisted the assistance of the regular school guidance counselor.
5. Her workroom became an important auxiliary service station for all aspects of the small-school-within-a-school. Children and parents came here to talk with the coordinator. The pupils who were not able to conduct themselves in an acceptable manner in the classroom were sent here to calm down, to talk over their behavior, or to study alone. Pupil groups sometimes worked here. All meetings of teachers and total Project staff were held

here. This room was the physical and psychological center of the small school.

6. The role of the coordinator changed as needs changed. At certain periods her duties were primarily concerned with teacher training, at others with curriculum development, at others with providing supplementary classroom instruction, and at others with the functions of a liaison agent between school, family, and social agency. It was this flexibility, this opportunity to adapt to needs, which gave heightened importance and responsibility to the coordinator.

This cataloguing of the functions of the supervisor should not be interpreted as meaning that she was all things to all people. She was, however, free of responsibility for administering the whole school. She did not have to supervise the lunchroom, patrol the halls, or make out bus schedules. She was free to focus her full energies on the teachers and pupils of the small-school-within-a-school.

Nor should this listing be interpreted as a job-description. It would violate the spirit of the role to specify the details of the supervisor's role in advance. Its basic characteristic is flexibility in response to need. Future trials of a school-within-a-school design might well call for different emphases or different responsibilities for the coordinator.

In sum, the three-year experience of the Project school staff highlights the critical importance of general, rather than special, supervision. The role as developed in this Project had its focus on children and teachers more than on subject-matter content. It was an effort to maximize opportunities for creative response to needs associated with teaching in a difficult school.

Follow-Up Study

A follow-up study will be conducted by the Office of Research and Evaluation of the Division of Teacher Education to determine whether or not the gains made by the pupils in the Project are reflected in subsequent achievement. Data comparing the experimental group youngsters with the Control Group will be sought relating to: enrollment in high school, curriculum pursued, academic records, behavior records, attendance records, and drop-out information and work histories. In addition, interviews will be held with the 130 participants in the Project to ascertain their satisfaction with their current school work, their perceptions of their academic performance, their reasons for dropping out of school if they have, their satisfaction with their work experience if they have dropped out, their plans for the future, and their evaluation of their junior high school experiences. This data will be issued as a supplement to the Final Report in the fall of 1965.

The After-School Centers

A second major aspect of the BRIDGE Project was concerned with the placement of Queens College undergraduates in after-school centers. It is a College requirement that all students who study THE PSYCHOLOGY OF THE ADOLESCENT STUDENT spend one afternoon or evening per week for a year in supervised group work experience in a community agency. In this activity students are expected to become acquainted through firsthand contact with the values, interests, and needs of adolescents.

In 1960 Dr Kornberg, then director of this Project, suggested that after-school tutorial centers be established in several junior high schools in depressed areas. He felt that if such centers were directly under the control of the College they might achieve several objectives of the teacher preparation program more effectively than the policies and practices then current. Consequently, in the period of three years in which the Project was in operation six centers were established in depressed area junior high schools, though only five were in operation at any one time.

The general hypotheses which animated this activity were that contact of undergraduate students with lower-class youth of diverse racial and ethnic backgrounds would develop more favorable attitudes toward teaching in depressed-area schools and that such contact would ultimately lead to the students' becoming more confident and effective teachers in such schools. It was assumed that the College students who worked with these youngsters would experience changes.

1. They would improve their understandings of lower-class youth of diverse ethnic and racial backgrounds.
2. Their anxieties about going into slum areas and working with the youth of these areas would be reduced, making it possible for them to develop feelings of sympathy and affection for such youth.
3. They would come to have greater insight into their own feelings, attitudes, and actions as these affect their relationships with adolescents.
4. They would develop more confidence and security in their ability to lead and teach a group of lower-class adolescents.

During the three years, about 170 college students served as group leaders in the after-school centers. They went in groups of ten to the schools where they were each assigned to a small group of pupils. They organized and conducted activities with the children, and at the conclusion of each session they met with the after-school center supervisor to analyze their experiences and to make plans for the future. Their experiences were also woven into their studies at the College both during regular class sessions and in specially organized small-group discussions.

Evaluation of the after-school centers took two forms. The after-school center supervisors were asked to respond to a questionnaire giving their opinions of the value of the enterprise. In addition, during 1962-63 an effort was made to conduct an evaluation by comparing two groups of College undergraduates enrolled in the adolescent psychology course--one group assigned to after-school centers (BRIDGE), and one group assigned to community agencies (Non-BRIDGE). Within each course section, students were assigned to one program or the other by means of a table of random numbers. The results of the informal evaluation are summarized here first, followed by the results of the formal investigation.

The Supervisors' Evaluation

1. The pupils in the schools benefited from the opportunity to make friends with and develop loyalty toward College students from outside their neighborhoods.
2. The academic achievement and general morale of the pupils were raised.
3. The pupils were somewhat disappointed in not getting more help in their academic studies.
4. The "hard core" pupils were not reached, for they did not volunteer and could not be persuaded to attend the centers.
5. The stereotypes of slum children which the undergraduates had in the beginning were broken down. They found many of the pupils to be sensitive, alert, vivacious, and affectionate.
6. The anxieties of the College students declined in intensity.
7. The students seemed to mature as individuals. They developed a sense of competency in working with these boys and girls and were able to discover their interests and to encourage them to reveal their thinking in natural, spontaneous ways.

The supervisors recommended that the goals and roles of the students be more sharply clarified, that the goups in the schools be held to a maximum of six members per college student, that the College make available a handbook of suggested activities to help students begin the program, and that the College staff take a more active part in the activities at the centers when they are in operation.

The Formal Evaluation

The populations that were studied consisted of an experimental group of forty students participating in the after-school centers and sixty-four students participating in social agency programs in various kinds of community centers. Both groups were drawn at random from the total enrollment in the full-year course entitled THE PSYCHOLOGY

OF THE ADOLESCENT STUDENT. The former group was designated "the BRIDGE Group" and the latter "the Non-BRIDGE Group." In order to refine the investigation, those students in Non-BRIDGE who had their field experience with disadvantaged youth were selected to form a third group, "Non-BRIDGE Lower."

Six instruments were developed and used in the evaluation: (1) A Survey of Understanding About Social Classes in America, (2) Self-Inventory of Field Experience, (3) Self-Awareness Inventory, (4) Queens College Adjustment Questionnaire, (5) Professional Experiences Check List, and (6) Personal Background Data Questionnaire.

These instruments were administered at the beginning of the fall term in 1962 and at the end of the spring term, 1963. They were designed, in part, to validate Dr. Kornberg's positive convictions regarding the after-school centers. In addition, a follow-up study was made of the rate of retention of the two groups in subsequent courses in the teacher education program and in the grades received by those who stayed in the program.

The following are the findings:

1. Both BRIDGE and Non-BRIDGE Groups changed significantly and positively in their understanding of social classes, but the Non-BRIDGE groups changed to a significantly greater degree.
2. Neither the BRIDGE nor Non-BRIDGE Groups changed significantly and positively in confidence in working with adolescents as measured by the Professional Experiences Check List; the Non-BRIDGE Group, but not the Non-BRIDGE Lower, did change significantly and positively in expressed number of varied contacts with adolescents.
3. BRIDGE Group members changed significantly and positively in their responses to the Self-Awareness Attitude Inventory.
4. Neither group changed significantly in response to questions concerning:
    a) Teaching as the preferred first occupational choice
    b) The importance of experience in selecting teaching as a career

c) Preference in teaching in a public school as compared to a private or parochial school.

5. No group changed significantly in responding to items requesting rank preferences for teaching lower-class youngsters, teaching in a slum, teaching in New York City, teaching handicapped or disturbed children, or in teaching Negro and Puerto Rican children. Evidently, all groups retained a strong preference for teaching either middle-class or socially-mixed youngsters.
6. When free responses to six incomplete sentences concerning feelings about field experiences and teaching were combined, no group changed significantly in relation to security feelings related to field work, leadership orientation, peer-related competitive tendencies, or nurturance orientation. However, the Non-BRIDGE Group did change significantly and negatively on one item related to self-orientation as compared to self-other, nurturance orientation.
7. Analysis of item responses on some of the above instruments and of individual as compared to group movement yielded evidence that significant individual changes took place even where total group changes did not reach statistical significance.

Responses on a supplementary questionnaire asking the educational psychology students to evaluate field placements indicated that as compared to students in other field placements BRIDGE students had smaller groups with which to work and had greater opportunity for sole leadership, but took a longer period of time to identify the role they were to play as student leaders.

The Follow-up

In a very real sense the final test of the BRIDGE Group experience is whether or not its members are more likely to persist in achieving their objective of becoming teachers, in accepting a position in a depressed-area school in New York City, and in continuing a career as a teacher. Insofar as it was possible the subsequent careers of the two groups were studied with the following results.

1. Between the BRIDGE and both Non-BRIDGE Groups, there were no differences in grades in Education 13 (Adolescent Psychology), Education 51 (General Methods), Education 61 (Specific Methods), and in Student Teaching; nor did there appear to be differences in the pattern of placement for student teaching.
2. The BRIDGE Group students did, however, receive significantly higher grades in Education 14 (which emphasizes learning theory, classroom management, and evaluation), and a significantly higher percentage of these students completed Education 51 (up to January 31, 1965). These findings would seem to be very important and may signify that the BRIDGE experience did have significant residual effects.
3. A rounding out of the follow-up study calls for further investigation of the predictive validity of the test scores, the percentage of students from all groups going into teaching, the percentage placed in lower class schools, the efficiency ratings of students as teachers in depressed-area schools, and the percentage who stay in teaching for a significant period of time and continue to teach the disadvantaged.

Discussion

The evidence concerning the value of the BRIDGE-Group participation seems to support at least serious consideration for the continuation of the program. The supervisors, though interested parties, felt strongly that the enterprise was beneficial both to College students and the after-school youth. The evidence of the formal investigation is less consistent. However, it does appear that the after-school centers were at least as effective as the agency centers in contributing to the goals of the Queens College course in the psychology of the adolescent student and perhaps, in some respects, superior.

There is a need, made more apparent by this study, for a more thorough assessment of the impact of field experiences generally on the knowledge, skills, and attitudes of students in education courses. Though convictions in this area are strong, there is little research to support either negative or positive opinions regarding the efficacy of particular field experiences. The BRIDGE-Group study could be a first step. The instruments which were developed could be further refined and validated and serve as bases for sounder measures in studies both similar to and different from the study discussed in this section.

Recommendations

For Teacher Education

As a result of our experiences in special service schools, we recommend changes in the Queens College secondary teacher education program along the following lines.

1. The teacher education program should increase its emphasis on methods of teaching educationally disadvantaged children.
    a) All teachers preparing to teach in the junior high school should have a substantial block of time devoted to the teaching of reading.
    b) More time should be given to discovering, selecting, preparing, and evaluating material appropriate for teaching disadvantaged children. More practice lessons and units should be prepared with this type of child in mind.
    c) More attention should be given to developing skills in the use of modern audio-visual devices and in using manual and art activities to achieve goals in academic learning.
2. The after-school centers should be re-established in some form and should be one of the alternative forms of field experience available

to students in educational psychology. Such experience can give the College control over the quality of the experience, and can give the students opportunity for leadership of a small group while still under close supervision. The results of the evaluation of the impact of BRIDGE after-school centers warrant further trial and study of such centers.

3. At least part of the teacher education program prior to student teaching should be spent in the observation of and participation in activities in the special service schools or in neighborhood centers in depressed areas.

4. Experience in after-school centers and student teaching in schools in depressed areas is only valuable if students are assigned to competent, experienced cooperating supervisors and teachers. A bad experience at these points will alienate, rather than attract, prospective teachers. The cooperating supervisors and teachers should be given time to work with the students. In student teaching, students should spend part of their service period in responsible teaching on their own without any other adults being present. It is only in this way that they can realize the dimensions of the problems which full-time teaching will bring. The regulations forbidding such independent teaching should be modified in the interest of better prepared teachers.

5. It is important that the psychology instructors and the College supervisors of student teachers should know the agency, the school, some members of the staff, and some children in the programs where their students are placed or where they supervise. This can be achieved by supporting programs of cooperative study and research between the college and the schools, by having College instructors serve as consultants to school staffs, and by allotting instructors

more time to spend with students in programs in special service schools.

6. College instructors who do not ordinarily supervise student teachers in slum schools should have their programs revised to include some service to these schools. They should act as consultants to school staffs in their areas of competency.
7. At least the first year of full-time teaching should be seen by the College and by the public school system as part of a continuous program of teacher preparation. The College should assume partial responsibility for supervision of its graduates in their first year of teaching in the City schools.
8. The College should join the Board of Education in continuing research, experimentation, and demonstration in attempting to assess better the learning problems of children and teaching problems of staff in these deprived-area schools.

For the Public Schools

The following suggestions grow out of the design and experience of the BRIDGE Project. The list is by no means exhaustive and includes only those propositions which the Project feels are clearly related to its special efforts.

1. Secondary school pupils in depressed areas benefit from a school design which increases the likelihood of their being intimately known over a substantial period of time by a small number of teachers. The school must make some effort to balance the chaos and confusion of the non-school world of many of these children with a stable, sustaining, and professionally concerned educational environment.
2. The supervisors in the junior high school should have their work focused on a group of children rather than on subject matter. The

policy which seems to be developing in the junior high school of having a subject-matter chairman supervise all the teachers in a given subject should be abandoned. The urgency of this recommendation is heightened by the announcement that New York City will develop a 4-4-4 school organization plan. Supervisors should be small-school leaders functioning somewhat on the model of the supervisor in this study. When the need for expert assistance in subject matter develops, the general supervisor should have some consultantship help available.

3. New teachers should have the benefit of a saturation program of supervision focused on their concern for a specific group of children. They should participate in frequent and regular conferences which are devoted to the study of (1) the pupils, emphasizing what can be done to help them in the classroom and (2) the classroom methodology and materials most effective in schools of this type.
4. It is absolutely imperative that the schools provide materials on the level of the students. The texts and other materials should be on hand when school begins. Teachers should have easy access to duplicating machines and audio-visual aids.
5. Teachers should be provided with course study outlines and be given thorough orientation and continuous help in their first year. Moreover, completely different courses of study from those now in use in New York City should be developed for the slow groups.
6. Lines of communication should be clarified so that teachers know how and where to obtain reports on children that are in the guidance or administration office.
7. Clerical work by teachers should be reduced as much as possible and clear explanations should be given to beginning teachers regarding this work.

8. The school should provide opportunity for teachers to share in setting up school rules and to make known their problems relative to school discipline and organization.

9. The BRIDGE Project, in its effort to keep conditions in the experimental classroom the same as those in the Control Groups, did not provide the special services that teachers in such schools need if they are to perform their professional duties to the maximum of their abilities. Teachers of the educationally disadvantaged need psychological services to assist them in diagnosing learning difficulties, clinical services for emotionally disturbed children, social services for work in the home, and special help for those children needing corrective and remedial reading.

10. The system followed in this Project of placing most of its severely disturbed children in a single class of almost normal size is not an adequate resolution of the problem of what to do with these children. Some disturbed children should be placed in special programs, conceivably residential, others dispersed throughout classes, and still others placed in very small special classes within the school. When the number of such children in any single class is high, the teacher is unable to teach and the other children unable to learn.

11. Classes composed of children who are well below grade level, though free of severe emotional difficulties, must be decisively smaller than they usually are. The maximum should probably be no more than 15 for the very slowest groups, and not much higher for the rest.

12. Some solution should be worked out for "left backs." These children are often the ones who cause the problems in a class. This was true in grade seven when several children who had been in the school the year before were in the Project classes. The Project experience in

moving children along with the grade has convinced us that this is preferable to holding them over. Little is gained by repeating a grade.

13. If the New York public school system should at some future date find that it has need for group intelligence tests to assist it in screening pupils for educational purposes such as special assignments or treatment, it might consider resuming the use of the Pintner-Cunningham Primary Test, formerly given in the first grade, and the Otis Quick Scoring Mental Ability Test: Alpha, Short, formerly given in the third grade. In addition the schools may find the Cattell Culture-Fair Intelligence Test, Scale 2 useful for similar purposes in the junior high school. These tests appear to have substantial validity in predicting academic achievement as measured by the Metropolitan Achievement Tests and may reveal aspects of cognition which are not apparent from the results of a testing program emphasizing language and quantitative abilities.

Chapter 13

A Proposal

The BRIDGE Project was only a beginning, an initial exploration of an extremely difficult and complex problem in American urban education. The final report of the Project must, if it is to fulfill its responsibilities, propose a continuation of this work. This last chapter will present a framework for future development. The ultimate purpose remains the study of the problems of teaching in difficult schools and how to improve the preparation of prospective teachers.

The Committee agrees that the following lines of development should be pursued:

1. The further use of the small-school-within-a-school idea, increasing the number of teams within a school and increasing the number of schools involved, with special attention to the supervisory processes.
2. The investigation of learning problems of children in depressed areas.
3. The exploration of curriculum, methods, and materials suitable to children in schools in depressed areas.
4. The exploration and trial of instruments to measure, evaluate, and record the progress of children in such schools.
5. The development of centers for student teaching in schools in depressed areas.

The statement which follows was prepared by Dr. Leonard Kornberg for the meeting of the Advisory Committee on March 28, 1963. It was entitled "A Small-School Design for Urban School Problems." It can serve both as an introduction to the detailed proposal which follows it, and as his contribution to the writing of the final report. It is presented as he wrote it, with minor changes and omissions as indicated by the words in brackets and the dots. After Dr. Kornberg's statement comes the present recommendations of the Committee.

A SMALL-SCHOOL DESIGN FOR URBAN SCHOOL PROBLEMS

[We have now reached the conclusion of] the effort of the BRIDGE Project to study the problem of preparing young, middle-class college students to teach effectively in the schools of the depressed urban areas. While our different experiences in this study have brought many ideas about the curriculum changes that might improve our teacher-education program at Queens College, the most intense realization has been that our pre-service responsibilities are not enough. We are convinced that in-service help to the teacher in schools of underprivileged communities is so essential that it must become our concern, to be shared with the public school authorities as part of the responsibility to our own students and graduates.

We have come to see that this in-service help must be offered in a very different way from what is currently in effect--i.e., with courses after school, ratings by Assistant Principals, advice from specialists, etc. From our intimate view of the teachers in our Project and from our observations in many schools, we have seen the need for a special framework of school organization planned to help teachers to grow professionally. The need will be clear to anyone who has had any contact with the difficult schools in New York, where teachers come to feel helpless and "trapped in the classroom." There is the unremitting stress of pupil transiency, large groups, reading retardation, and ego immaturity. The teacher feels increasingly bound by the routines he must set, by the simplifications he must make, by the tortoise pace of instruction, by the results that so often end in inattention or disorder. He comes to feel that one cannot do a professional job here; and if someone tells him this need not be so, he is often too resigned or too cynical to face the possibility.

We have seen this pattern of effects among many teachers in the difficult schools and even occasionally among our BRIDGE teachers. We know that there are exceptions to this pattern, that there are some master teachers and supervisors. But one cannot deny that they are few and that the failure pattern is widespread. We question whether the reason for this is simply an absence of educational talent. We are convinced that a contributing cause lies in the teacher's isolation in a classroom where the children's needs are too complex to be faced or understood alone.

The BRIDGE Project has set up a model which is an alternative to this isolated position of the teacher....It must be noted first that this model has had only a brief test with a very small sample of school personnel. Yet as we have worked with our teachers for [three years], as we have seen in operation this small-school design, we admit that we have become excited about its value. We believe its success proves that it ought to be tested on a broader scale than thus far attempted. And we think that a review of our experience with this small-school will support our claim. It will also clarify the idea that has come to preoccupy us in our study: that the good teacher cannot be simply "prepared" in a pre-service program at a college, that in his work too his education must go on.

Interestingly enough our focus was somewhat different when we designed our framework for the demonstration at the [Project school]. By selecting three recent graduates of our teacher-education program who would teach in the academic fields of English, social studies, mathematics and science (one teacher handling the two latter subjects), by hiring a veteran teacher to supervise this small and inexperienced staff, by arranging that a random sample of ninety youngsters from an incoming seventh grade would serve as our experimental population for the three-year junior high school period, we had designed what we called a "window" on the new teacher's problems in a school like this, the relevancy these problems have to our program at Queens College, and the learning potentials in these children of a low-income, Negro ghetto. We felt that this framework would be a self-contained unit that would allow us to experiment with new curriculum content and materials, that would help us to better understand these youngsters and the teaching approaches which would work with them, and finally that would provide a three-year continuity between pupil and teacher. We hypothesized that much of the conceptual and language poverty of these children resulted from not having stable adults with whom they could share a world they were experiencing.

What we originally wanted we think we have largely obtained. Our framework for the demonstration classes [gave us] a view of the realities in a school like [the Project school]. But it has given us something more, something that was in our thinking from the start but not a major concern then. We have come to see that this small-school design provides a unique opportunity for teacher supervision and curriculum development. We believe that it shows a way to change the teacher's isolation and the children's fragmentation of experience in big schools in slum neighborhoods.

It need not be exactly copied, for it may not be economically feasible to have the unit as small as we have in BRIDGE, with three teachers and one supervisor.... We have considered a modification: we would recommend a framework of small-school units, each containing four classes in the major academic areas of the junior high school, with a supervisor for each pair of units--or supervising eight teachers. The teachers and pupils in each small-school would stay together for the three grades of junior high....

. . . .

The major question is, what would be the work of the small-school, what would justify its organization, what would be different in it from what occurs or is possible in the usual framework? We believe the experiences in the demonstration provide one answer, an answer limited by the scope of our inquiry but perhaps not in the scope of its relevancy. What has emerged in our Project has been, first of all, a team experience--or the sharing of the resources possible in a group of professional peers. The teachers also share one another's difficulties; they share each other's children; they share a bafflement about how to teach them. Group development has not been quick or easy, for there are competitiveness and defensive concealment among adults too. But a team has gradually emerged, and we see that it is more than the product of a supervisor's excellent guidance. It has come also from the opportunities in the design itself.

The small-school enables our teachers to make and evaluate decisions which affect their youngsters and their instructional needs. They re-group classes according to their idea of what would make more teachable groups. They coordinate the work on reading skills in all classes. They have a continuing view of current activities in each class and thus correlate and extend these experiences....The small-school design spurs the teachers to adapt a curriculum to the particular children they teach and together come to understand. It helps them to value certain techniques formerly unbecoming to a secondary-school teacher--the repetition necessary, the slow pacing of a lesson, the detailed expectations for class behavior, the strategic allowance of some deviation or defiance. And it gives us all an insight about the relief these children feel when there is a consistent structure to depend on but which will not close in on their individuality....

. . . .

One other feature of our Project at the /Project school7 should be brought into focus. It shows how the small-school design can involve the guidance and psychology personnel of a school. We know that these members of a school staff often feel remote from classroom realities and teachers' concerns, that they often find it difficult to communicate with teachers or to make recommendations about children that the teachers will understand or find useful. We think that the case-study conferences which have been developed in the demonstration offer one way in which teachers and clinicians can learn from each other.

The plan for the case-study conference is relatively simple, requiring only that the teachers have the same free hour, work with the same children, and independently write a brief description and evaluation of the child to be studied. In addition to each teacher's report, the supervisor summarizes information from the school records and the guidance counselor interviews. Since we have a full-time psychologist for the research aspects of BRIDGE, we can also have an analysis of the WISC intelligence test and the MET achievement test results. This typed material is collected by the supervisor and then is dittoed and given to the case-study participants at least one day before the conference. (At /the Project school7 this year, the eighth-grade guidance counselor has been able to be one of the participants.) The conference takes place every week, and the child studied is chosen by the teachers in a relatively unplanned manner--not because he is a special problem, but probably because he has not been studied yet. The task of the conference is to understand the child's classroom behavior and the teaching approaches that would be more effective with him. The conference process is invariably a struggle to see the child's motives and resources, to see what is meaningful to him, to see his outside world of family, slum, and caste influences, and to see what are our own feelings about him--what they do to him.

We believe that this conference process can only occur in a small-school design. There are other case-study meetings elsewhere involving emergencies and problem children, usually with one or two teachers present and many non-classroom personnel. But their objectives and dynamics, however useful, are inevitably different. The point is that something unique happens in a recurring child-study effort by the same group of professionals who live with the same group of children. There may be no clear recommendations forthcoming in a conference; there may only be confusion sometimes. But the cumulative effect is to have a much deeper understanding about one's children and one's teaching resources. This kind of case-study conference can be a meeting ground for teachers and clinicians. We believe it can be even more significant as a tool by which the teacher shapes his professional judgment.

Finally, we have intimated that our small-school at /the Project school/ is no panacea. Difficulties remain or take other forms. The seventh-graders become obstreperous eighth-graders full of adolescent turmoil. The classroom familiarity may become threatening for some youngsters, or so safe for others that they clamor for attention. What are the manageable, effective strategies for an individualized curriculum? What are the non-verbal, manipulative tasks that can make the academic lessons concrete and give a sense of mastery to /these/ children... ? How can the teacher apply to the process of learning these children's preoccupation with being adolescents and being Negro--two areas of concern in which many adults have no easy conscience?

The small-school does not have ready answers; but from what we have seen in BRIDGE, we think it offers a way to deal meaningfully with these questions....

There are two current cliches about coping with the learning problems of disadvantaged children: that they need [enriched experience] and that they need better teachers. Who can deny this? But bringing in more materials, more trips, more student-teachers, more guidance and reading experts--is not enough. What is missing is a situation in which deprived children can have time to learn to trust their teachers, and in which teachers will have time and help to learn to teach these children. We have seen how slowly this learning comes--as tasks are mastered, experiences are shared, and a sense of worth rather than failure develops.

(End of Dr. Kornberg's statements)

When Dr. Kornberg prepared this statement, he was primarily concerned with further trials of the small-school design. In the last year of operation of the Project's small-school, its value as a center for the training of student teachers as well as beginning teachers became more apparent. The Project experience indicated that the full-time teachers as well as their student apprentices benefited from participation in their mutual tasks. The students' participation in the studies of the children, of the curriculum, and of instructional procedures provided an excellent supplement to classroom practice for the student teachers. Their reports (see Appendix H) show their enthusiasm for this approach. At the same time the flexibility in grouping the children, the individualization of instruction, and the creative use of diverse materials heightened the usefulness of the students to the regular teachers and gave the students responsible roles in the teaching enterprise. Consequently the proposal which follows is focused on the development of a center for the pre-service training of teachers while continuing the College-school cooperative attack on the problems of beginning teachers in difficult schools.

As a first step we suggest the creation of one student teaching center in a junior high school in Queens where there is a high proportion of children who are designated as "educationally disadvantaged." This center, using the small-school-within-a-school organization, should combine the introduction of new teachers to their tasks with pre-service training for student teachers. It should be organized along the following lines:

1. The center should have two teams of teachers working with eight classes and eight to sixteen student teachers per semester. Each team should consist of four teachers and a half-time coordinator. The team should consist of one teacher in each of the following fields: English, mathematics, science, and social studies.
2. Four of the teachers, preferably one in each subject area, should be experienced teachers. The other four should be beginners. Insofar as it is possible, 90 children should be kept with the same team of teachers for three years. Each team should be responsible for the academic instruction of the 90 children for about two-thirds of their school day.
3. Conference time for the study of the children and the development of appropriate classroom materials and procedures should be part of each teacher's schedule. The teaching load of those working in this design should be limited to 20 periods per week plus five periods for conference. The unassigned periods of all personnel should coincide to allow for the close professional exchange essential to the nature of the design.
4. A coordinator should work with two teams both collectively and individually. The subject-matter teachers should work in pairs as well as part of separate teams. Each team should have a two-period meeting once a week to study children by means of the case-study method developed by the BRIDGE Project and to evaluate classroom activities and materials together under the guidance of the coordinator. The coordinator should also have at least one weekly individual conference with each teacher.
5. Intensive supplementary services should be provided the teams. The part-time services of a guidance counselor, a reading specialist, a social worker, and a psychologist should be provided. Secretarial service should also be available.

6. After a period of orientation and preliminary development, for one semester, student teachers should be assigned to the teachers and the teams. Each team should have from four to eight student teachers. They should be seen as part of the team and should attend group meetings.

7. Six staff members from the Education Department should be given two days per week, or two-fifths of their time, to work with the team members in the center. Part of this time may be charged to the supervision of student teachers in the program, but each staff member will have a minimum of one-fifth of his program allotted for participation in the Center itself. Four of the College staff should be assigned according to subject areas, one College member should be a specialist in psychology, and one should be appointed to coordinate the College-school enterprise. The psychologist should be responsible for organizing and overseeing the development of the pupil study program and should take responsibility for the psychological aspects of cooperative research.

8. The cost of this program should be shared by the public schools, the College, and whatever other sources of funds such as private foundations or the U.S. Office of Education can be interested in the student teaching center.

Though it is difficult to estimate exactly how much this plan would exceed the present costs of providing instruction for the same number of children and student teachers, it appears that it calls for two extra teachers, a supervisor, approximately a full-time person at the College level, and some additional guidance, remedial, social service, secretarial and psychological services, as well as funds for additional materials.

It is possible that redeployment of present personnel and re-definition of their functions might lessen the cost. Assignment of a clerk to a small-school might invest her with the duties usually assigned to the general office, such as attendance records, personnel records, ordering materials, and handling correspondence. A reorganization of the schedules of a guidance counselor and a remedial teacher might well provide their services without additional cost. On the other hand, social and psychological services need to be substantially increased.

The vision of the training of teachers as a cooperative enterprise of college and public school is now widely held. Harry N. Rivlin, Dean of Teacher Education, City University of New York, in his Teachers for Our Big City Schools, developed a framework for nurturing this cooperation. Such training, as Dean Rivlin clearly states, must be more than an apprenticeship under the watchful eye of a practitioner. It must be a meaningful joining of educational theory with classroom practice. The proposal as outlined above, including as it does the union of supervisor, teachers, service specialists and student teachers, public school and college staff, with their attention firmly focused on the needs of a relatively small group of depressed-area pupils for a substantial period of time, carries great hope for the development of professional attitudes, skills, and insights in all its participants. A beginning has been made. Much remains to be done.

APPENDIXES

Explanatory Note

These appendixes are of two types. Appendixes C (The School Project) and D (The After-School Project) contain the test data which were collected in the formal evaluations of two aspects of the Project. Since the instruments used in the evaluation of the After-School Project were developed by the staff, they are included in Appendix D as well as the results. The tables are numbered in relation to the chapters in which they are discussed, those having an initial number 2 refer to Chapter 2, an initial number 8 to Chapter 8, etc.

The other appendixes (A, B, E, F, and G) are illustrations of the kind of work carried on in the School Project. The reader will find here a report of the evaluation of curriculum materials, a description of a special project, a sample case study report, excerpts from student teacher reports, and a special study by the staff psychologist not reported in the main body of the report.

APPENDIX A

Evaluation of Curriculum Materials

During the third year of the Project, one meeting each week was devoted to curriculum evaluation. It was decided to spend the first semester analyzing the materials we had been using during the past two years. Our intention was to share experiences so that we might recommend to future teachers of culturally deprived children the kinds of material we had found suitable. As stated previously we had, in the experimental classes, followed the New York City course of study as to major topics or units although we made modifications in emphasis and sequence. Now we wished to look back on our use of materials and make suggestions that would apply if we were to begin over again. The following conclusions grew out of the weekly discussions and represent, in substance, the opinion of the staff and College Committee.

Textbooks. The major kind of instructional material used in the New York City junior high schools, as in most schools in the United States, is the textbook. Usually a single set of books on the grade level is available for each class. For the beginning teacher a text often gives a sense of security, and a good and appropriate text can serve as a shortcut to selecting and organizing the subject matter to be taught. All the educators are familiar with the limitations of a text and no skilled teacher will rely entirely upon a text, but we would be unrealistic if we did not acknowledge the fact that the textbook will be with us for some time to come, and therefore comment on its use. Following are our conclusions regarding the use of textbooks in classes of culturally deprived students.

Using the Textbooks Provided by the School

Most of the regular seventh and eighth grade textbooks furnished by the school were not suitable. Because the majority of our children were at least two years retarded in reading, they could not read the seventh and eighth grade texts. In addition, some of the texts were unsuitable for reasons other than difficulty.

Although limited funds were available for materials for the Project, very little material was procured before school began. It was our idea to use the prescribed material where we could and to supplement only when necessary. A few sets of elementary textbooks were discovered in the storeroom of the school, but most of these were of ancient vintage and in bad condition.

Later in the year some new texts and other basic materials were ordered,* but meantime the teachers tried to make use of the texts that were assigned. Our coordinator suggested the following ways of using the texts that are above the reading level of the children.

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*We did not make an exhaustive study of the text material now on the market. If our study had been primarily concerned with curriculum improvement, we would have needed to appraise much more systematically all available texts. But since our Project was concerned chiefly with the problems of new teachers in an actual New York situation, we felt that trying to use what was available in the school would give us a realistic picture of what new teachers face. It is encouraging to find now, four years after the project began, that more suitable texts are now available in some of the subject areas in the schools.

Ways to Use a Textbook That Is above the Reading Level of the Children

ALWAYS work in advance on concept development using
pictures,
films and filmstrips, and
class discussions

GENERALLY develop useful vocabulary in advance of reading. (Leave the more esoteric vocabulary. If it is essential for understanding, provide a glossary.)

WHENEVER POSSIBLE draw analogies between reading material and concepts already understood. Note relationships. Utilize transfer of learning.

WHERE READING LEVEL is two or three years above achievement level of pupils, but concept level is relatively low:

Motivate silent reading of short passages at a time, and set reasonable time limit. Then a more able pupil can read aloud while others follow in their books.

or

Provide questions which can be answered by pupils' skimming to note specific details.

or

Select for pupil reading certain passages which may be relatively simple. Teacher reads or summarizes intervening material.

WHERE READING LEVEL AND CONCEPT DENSITY are totally inappropriate to pupils' ability:

Teachers tape record a selection and let pupils follow in books as they hear it read. This makes possible group and individualized reading as pupils use earphones.

Utilize maps, tables, diagrams and illustrations. (Guided noting of details and drawing of interences.)

Pupils listen as teacher reads. Discussion of difficult concepts. Comprehension sheet based on recall of listening and discussion.

To fix learnings--possibly True or False list of major concepts. Then pupils note these in notebooks.

or

Use summary sheet to be filled in for notebooks. (Done cooperatively for slow learners; independently for others.)

The science teacher's description of how to use a difficult text with her three classes.

Example: Lessons on Static Electricity Text: pp. 342-348
Science for Progress, Ames, Morris U. and others,
New York, Prentice-Hall, 1956 (2nd edition).

Class 9-312 Read the information directly from the text without review of vocabulary. (Median Reading is about 8. 5)

Class 9-310 Talk about titles and paragraph divisions. (What do you think we will learn here?) In all cases the lessons on static electricity proceded the textbook work. It is not used as an introduction. (Median Reading Grade--about 6. 5)

Vocabulary will be isolated and reviewed--used in sentences. Silent reading--paragraph by paragraph with comprehension. Questions will be asked. Two or three summary sentences will be written in the books telling in a more simple manner what was learned.

Class 9-306 (Median reading level--4. 5) -- First we will review concepts already learned concerning static electricity.

Develop the meaning of static.

Recall the work of Benjamin Franklin and his kite incident.

Review our knowledge of negative and positive charges. We can then talk about the words directly related to the reading: shuffled, shock, charges, electrified, negative and positive.

Look carefully at the pictures and recall the demonstrations we did in class.

Read the paragraph silently, and then aloud. (pp. 342--to the top of 343.)

Discuss the repelling and attracting ability of charges. Which pictures on the page show this to be true. What signs show negative? What signs show positive?

Read the paragraph "Like Charges Repel; Unlike Attract."

The paragraph on electrons is a little too advanced. We might skip that and go on with "Insulators and Conductors" and this can be extended or shortened depending on the time available.

The adaptations are not complete, but give some idea of what can be done. Unfortunately all topics are not handled with ease (in the teaching or the reading). It would be much easier if we had elementary school science books without a grade designation for classes like 9-3. If a teacher had nerve she could withhold texts until parents asked for them and they could know there weren't any appropriate books available. It takes a lot of hard work and patience to adapt the material for slow readers. Often it is easier to do without the book. This is especially true when a teacher has never had any training in this type of work.

You will note the teacher's final remarks. It was agreed that schools should make every effort to obtain texts that children can read, even if they are elementary texts. Publishers now print books that are not labeled as to grade. Although we found certain non-text material more useful than many of the available texts, we did purchase some textbooks.*

From our experience in selecting texts for these culturally deprived children, we would make the following general suggestions to teachers and supervisors.

> There should be careful diagnosis of children's reading level in order to select the elementary texts or junior high texts written especially for retarded readers. If elementary texts are chosen, they should not contain grade designations, and the content and illustrations should be of interest to adolescents.
>
> The illustrations should be clear, bold, meaningful, and relevant.
>
> The material should be well organized with clear paragraph headings.
>
> Double columns are not advised.
>
> The books should contain fewer topics than the usual junior high text and each topic should be supported by a good bit of detail--narrative or explanatory.
>
> If questions, exercises, or tests are included, they should meet the criteria for good learning exercises. (See section on workbooks.) Directions should be simple and readable.

Before commenting on various uses made of textbooks by the teachers, we might say a word about our particular children's attitudes toward textbooks. Because a text is a symbol of learning and is used so extensively and often exclusively, our students attach a prestige label to texts and give them significance far beyond their worth. Students have often said that it is not learning if they read from a trade book or watch a film. Parents also want children to have a text. Although we think that children, and even parents, can be weaned away from this distorted and narrow notion,** it does no harm to cater to it in the beginning. Consequently we decided that the teachers should assign a textbook to each child and even tho it might not be used regularly, they could at least dip into it occasionally.

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*Without an exhaustive study of the texts available, we sometimes made poor choices--one of us seeing something that we wanted to try, or picking something because it could quickly be obtained.

** One teacher tells how he helped the children see that non-text material also contained facts. "It has been my aim this year to help the pupils perceive of less traditional materials as a source of learning. To overcome the resistance of the pupils who felt that you can learn only from a text, it became necessary to structure the work from other sources so as to enable them to see tangible results of their work. For example, certain guide questions about a particular country were presented to the class and one-half of the class used a text to find the answers and the other half used Junior Scholastic which had articles about the country. The class saw that those who used the Scholastic were able to obtain not only more, but more interesting information than those who used the text."

The textbook should not dictate the curriculum, but serve as one resource for learning. As stated previously, if good texts on appropriate reading level are available, a new teacher may well rely on them for at least part of his class work. However he will soon discover, if he didn't know before, that even the best texts are inadequate. His own ideas and the particular deficiencies and desires of the children will soon challenge him to plan his own units and lessons, using the text only as he chooses in order to achieve his own objectives. He will find also that a single text, even if it is geared to the average or slowest students in the class, will not provide adequately for the range of abilities and interests in every class. Most texts, because they cram too many topics into one cover, are not particularly interesting, and the teacher will soon find other sources which are much more stimulating. Consequently he will use multiple texts or texts plus other materials. During our three-year period, textbooks were used in the following ways.

1) In certain classes texts on various levels were provided, and students worked individually at their own rate. This arrangement was particularly successful in mathematics and where a series of texts on several levels was used.

2) Texts were frequently used as reference material on particular topics or units.

3) Certain texts with particularly good maps and charts were used during class periods as basis for discussion or written assignments.

4) Texts were used to teach particular reading skills--both reading text and literature and social studies texts.

5) Questions and activities from certain textbooks were also found helpful and were sometimes used for homework assignments or class exercises.

Appropriate textbook content. Textbook content, like any subject matter, is learned better and faster if it is meaningful to the child. Since most textbooks are written primarily with the middle-class child in mind, we can assume that the authors believe it meaningful to such children. The question arises, when one deals with educationally disadvantaged children, is the text material also meaningful to them? Although generalizations are hazardous because factors other than cultural deprivation enter in, we will venture to make the following comments as a result of our experience.

We found that certain ordinary common facts and ideas are not known to many of the children. For example, they lack concepts of time, space, and place. Consequently, attempts to teach history and geography material which pre-supposed a background of time and place were futile. The background had to be supplied and the most simple material selected.

The teacher must be a diagnostician. He must find out each day--by listening, probing, and encouraging the children to talk--what they know and what they don't know. He must build on what they know but also try to provide opportunities for making up the deficits. Here is an example of what we mean. In Teenage Tales, designed for slow readers, there is a story of a "hunt." The teacher took for granted that students would know the word "pheasants." They did not. Some children thought pheasants were people (obviously confused with peasant). Others said animal, or insect, and one child finally said it is one of those "big birds whose tail goes up" (peacock).

The material of the text, therefore, must not be too far removed from the child's experience--and the teacher must take time to supply gaps and make connecting links. It must be remembered, however, that there are interests and experiences that the students have that teachers are not always aware of. Teachers must listen to children talk in order to discover the kind of TV programs and movies that they see, the work and home experience that they have, the magazines they pick up. These will give clues to genuine interests. Then there are the universal topics which appeal to all adolescents regardless of background. These universals seem to have an even stronger appeal to culturally deprived adolescents than to middle class children--probably because they deal with emotions--and many of these children are emotionally deprived and need vicarious experiences to relate to. Consequently stories of events and people who express strong feelings of sorrow or joy, or who are mysterious and exciting, have great appeal. We have found also that there is great curiosity about illness, especially disease. Perhaps this is because the children lack security--or because they are less protected from sickness and death than middle class children. They frequently have to deal with sickness, take care of family, and make decisions. Many of them also are curious about causes of sickness and have begun to doubt some of the superstitions and folk explanations heard in the home or neighborhood.

Consequently, if textbooks can be found that contain a bit of drama, and which feature biographical material, they should be selected. Narrative enlivens historical events and science concepts and recent textbook writers have now come to accept the long known fact that children like a story. It does not seem to matter if the story's setting* is long ago and far away or in the present if it deals with human relations and is exciting. In selecting mathematic texts, the important factor seemed to be clarity. The math material did not need to be related to daily living to be motivating. If it was within the grasp of the children, if the directions were clear, and if they could see their progress, they seemed to be satisfied.

Non-Text Basic Reading Material

In the literature and reading classes, many stories not included in the texts were used as the basic book. Early adolescent literature is plentiful today and some of it excellent. Paperback books, particularly those published by Scholastic, such as Blue Willow, The Raft, A Cap for Mary Ellis, and By Secret Railway were thoroughly enjoyed by the children. These books were used as the common reading book like Silas Marner of old. They served as excellent material for discussion of human relations as well as for developing vocabulary and for learning a little about literary style.

We also used non-text material as basic books for certain units in social studies and science. Abraham Lincoln by Colver, Frederick Douglass by Bontemps were used in the unit on the Civil War. Squanto and the Pilgrim was used during the study of the Colonial period. A unit for the slowest group was planned which included the use of The Arrow Books of States for basic information. The Book of Presidents was used in a similar manner. In science also various trade books and paperbacks were used as basic reading for the total class. The How to Do It and the We Read About series were within the reading range of the slowest children and were appealing to them.

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* For description of special use of Squanto and the Pilgrim for the slow group, see Appendix B.

Work Books and Work Sheets

During the first semester of the demonstration, the teachers prepared most of their own "work" material. In connection with unit topics, the social studies teacher frequently made ditto sheets containing questions or exercises for the children to work on at school or at home. In mathematics class and in English class, the students were often given practice skill exercise sheets according to their particular needs. As anyone knows, the preparation of such materials is a difficult and time-consuming job, particularly for a beginning teacher. Consequently the supervisor and teachers began to look around for commercial materials that might fit into our general pattern of instruction. Since no outside workbook will ever completely meet the aims a specific teacher sets for her particular class, the usefulness of any general evaluation of workbooks is limited. However, since our discussion included a more or less objective look at certain commercial materials as well as comments about the wisdom of using workbooks in our own classes, we shall summarize some of our ideas for what they are worth.

Reduced to the simplest common denominator, a workbook seems to be something you write in. A textbook may contain the same kind of suggested review questions and practice exercises at the end of a chapter, but since there are no blank spaces this part of the text is not called a workbook. Another text may have another book accompanying it, but since it is in soft cover and has spaces to write in it is called a workbook. Of course there are workbooks that are really textbooks. These, although usually paperback, include some narrative or text material preceding or following the exercises. The theory back of use of the ordinary workbooks is that students need to have some practice in learning a skill, in recalling and organizing facts, or in making applications of principles. Many times the exercises are more like tests and are used for diagnostic purposes, but usually they are supposed to be aids to the children to bring about retention or to enrich or expand meaning. Simply because teachers often misuse workbooks, we do not believe that they should be rejected out of hand as possible instructional material.

In no instance did the project teachers use workbooks as an end in themselves or as the only material for a particular unit. The workbooks were selected to provide practice in the skills or concepts that had been decided upon previously.

Workbooks that accompanied texts and exercises included at the end of chapters in the text were used as the teachers felt they fit into the basic aim. The teacher selected only the exercises she thought most appropriate to achieve a specific goal. To improve reading skills, the comprehension and vocabulary exercises were selected. Sometimes the entire class would read the material, with one child reading aloud. Then, after discussion, they would all write out the answers. Sometimes the material was used for independent study according to the particular needs of the pupil. Self checking devices were made and progress reports were kept.

On the whole, most of the workbooks tried out were unsatisfactory. The Turner-Livingston series was an exception.* The teachers suggest that the following points be kept in mind when selecting commercial materials of this type.

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*Turner, Richard, The Person You Are, The Money You Spend, The Jobs You Get, New York, New York University Press, 1962, The Turner-Livingston Reading Series. These books contain narratives about an adolescent boy with problems similar to the children in our group. The exercises are clear, achievable, and varied. They provide for practice in basic skills.

The format should be attractive.

The directions should be clear and concise and be able to be read without much teacher help. The directions in many of the workbooks could not be understood by the children.

The exercises should be easily checked and graded and should be organized around a particular skill. They should be varied and should be on different levels so better students could move on ahead.

The teachers concluded that these materials, which are so often used as busy work, can be valuable if they are used for diagnosis, for checks on achievement, for providing for individualization, or for providing for variety of activity. It is often a good idea to separate these sheets and to classify and use them according to individual needs of pupils.

Because much of the commercial material did not meet our needs, work sheets were often prepared by the staff. Members of the College Committee prepared material to accompany Squanto and The Pilgrim, Frederick Douglass, and The Arrow Book of States. The teachers and supervisor prepared work sheets to go with short stories and to parallel science and social studies topics. This procedure is time consuming and difficult, particularly for new teachers, although it has the distinct advantages of being keyed to specific needs of particular groups of children.

Supplementary Material

Paperbacks, magazines, booklets, and bulletins

Because of the lack of supplementary material in the school, we tried, with a limited budget, to supply additional material. Not a great amount of money was expended and we are convinced that even within the limited public school "allotment per child" the money could be spent much more wisely than it is at present. It is encouraging to find the wide variety of material available in paperback. As mentioned previously, many of these paperbacks were used as basic content for an entire class. Paperbacks were also used for classroom libraries for enrichment and individualized free reading. Selections from the Lucky and Arrow Book Clubs* were most appropriate. One total Scholastic Unit--a packet containing a variety of books and sheets on a particular theme--was also used. Although many of the books were found suitable, the teacher did not like the package project. It is sometimes frustrating for a teacher to try to follow an elaborate and detailed plan prepared by someone else. With more and more quality paperbacks available the teacher should be able to provide much greater variety of material, and be able to individualize his work with greater ease. Many paperbacks can be purchased for the price of one hard cover text. School Boards must soon realize that this type of material is often more suitable than textbooks and consequently should modify regulations regarding the type of material that the City is permitted to furnish.

Current Event Magazines

One set of The Junior Scholastic was purchased each year and used in all classes. Newstime and Science World were provided for one year. These magazines were used in many ways. Special issues on countries or events were used when they fit into the social studies unit being studied. For example, an issue on Middle East would be kept and used when students were studying this topic. The short stories in Junior Scholastic were sometimes read in reading periods and the sports events, puzzles, etc. were read by children during homeroom period.

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*Scholastic Publishers

The teachers stated that they also used the magazines with some regularity for current events discussion. Much criticism has been leveled at teaching of current events in junior high schools. It seems to us that the critics are right when they say that much of the teaching is superficial and a waste of time. Middle class children often absorb knowledge of current affairs from family dinner conversations, from listening to the news together, from breakfast comments in the newspaper by father. Consequently, a weekly current event period adds little. However, our children seldom discuss current affairs with adults, do not have a good newspaper available, and listen only fitfully to TV news. One teacher felt that the children need to fill in the gaps in their general knowledge and that a regular current events period helps do this. They feel that these especially prepared magazines fill the bill and are far better than the daily press for children at this age. The children looked forward to getting the paper each week. They have not had the experience of having something come regularly. Few have newspapers delivered at home or subscribe to magazines.

The Scholastic magazines were used in many ways. Seldom were they read straight through. Teachers usually let the children browse a while because they loved to do the puzzles, read the jokes, and look at the pictures. As previously stated, the short story is usually good and can be read in class or individually. Frequently the news items are too abbreviated to stand alone, but can, of course, be supplemented by other papers and by the teacher. The feature article is frequently well-developed and this article may be assigned for homework, read in class, or saved until it fits in with a unit. A feature of particular interest to our students was the one describing the lives of boys and girls in other lands. This is another indication of the juvenile interests of our junior high age boys and girls. The science teacher believes that World Science news supplied the current scientific knowledge and many interesting items which are not included in most textbooks.

Copies of other magazines such as Life, Ebony, and sports and women's magazines were placed in the classrooms and used for research and general reading.

Free Materials. The resourceful teacher has always taken advantage of the host of free resources available. Though he needs to discount the propaganda, he picks and chooses from the wealth of beautifully illustrated and often interesting commercial material. Certain companies, employing educational consultants and advisers, put out material sometimes superior to that published by educational publishing companies.

The Bell Telephone Company supplies complete units which include the instruments and recording devices as well as workbooks. This material was particularly valuable to our children because of their lack of fluency and their insecurity in using the telephone. It appealed particularly because, although they are shy in real situations, they love to dramatize. This vicarious project was a first step to some real experience with the telephone. They learned to order and to make appointments. The telephoning project also helped the teacher in appraising and correcting their pronunciation and diction.

Other material particularly suited to our children related to health. The Red Cross booklet on The Story of Blood, the Dairy Council on How Your Body Uses Food, and the information from the Department of Health on venereal disease were used in science classes. Material from life insurance companies was particularly good for teaching the meaning of charts and graphs in the mathematics classes.

Cartoon and comic books such as "Tommy Gets the Keys," put out by General Electric, appealed to our children. Standard Oil put out a booklet on Negro monuments in the United States, B'Nai Brith furnished us with copies of Immigrants by John F. Kennedy.

A host of fine free material was obtained from various foreign governments and tourist agencies. Among the many found useful were Brazilian Tourist Publications; Varig Airlines; Canadian Government Tourist Office, and the French Tourist Office. Bankers Trust supplied an excellent booklet on New York.

Because of the plethora of free materials that may be obtained, a teacher needs time to appraise them carefully and to plan for their most effective use. There also must be space to file and store materials. BRIDGE was fortunate in having one large room that not only served as the coordinator's office but also provided space for storage.

Visual aids. So many new kinds of equipment are now on the market and each day new gadgets are made available. Overhead projectors, opaques, tape recorders with earphones, individual viewers for slides as well as the regular movie and slide projectors are being provided for all junior high schools. Unless, however, there is a well-organized visual aids room with a person in charge who has time to make the material available when needed, much of the equipment is not used. Although all teachers should learn how to operate equipment and select materials, they do not have the time or energy if methods aren't provided for easy access. During the first two years of the Project, when we were in the old building, many rooms did not have dark shades, and dollies weren't available for transporting equipment. There was a lack of organization for requisitioning, and very few good films and filmstrips were provided by the school. Our teachers obtained material from the College and other sources. They found the Coronet film strips to be among the best, particularly those dealing with cities and countries of the world.

Tape recorders were often used. Children recorded skits and dramatizations in social studies and English and played them for the entire class. Recordings were also made for the purpose of improving pronunciation. Much more time should have been devoted to this. The teacher sometimes read a story on tape and students in small groups listened to the story as they read it silently and then filled in exercise sheets. Overhead projectors were used for diagrams and charts were used for displaying and correcting students' work.

The teachers were convinced that greater use could be made of visual aids, but that careful selection is necessary. A school with a visual aids department can assist the teacher in selecting and obtaining the appropriate material.

APPENDIX B

The Squanto-Douglass Projects

It soon became apparent in the first year of the Project that materials and methods would have to be considerably modified if the 7-3 ("lowest") class was to progress in its learning. Though almost all of the children in the Project classes were below grade level in reading, the 7-3 class was severely retarded. Most of its members scored at the third grade level in the reading sub-tests of the Metropolitan Achievement Test and a few were even below that level. Adaptation was, of course, needed in all subjects, but a special effort was made by the social studies teacher, the coordinator, and two members of the College Committee to find an approach which might increase the learning in the social studies classroom.

Children are generally not interested in social studies. The participants in the BRIDGE Project believed that at least part of this lack of interest as manifested by the children in the Project classes was a result of the abstract nature of much customary social studies material, and also the rapid shifts in time, place, personalities, and events characteristic of its content. The problem was intensified by the behavior of the children, for when they were not interested in social studies, they became restless and disorderly.

The participants also thought that the social studies teacher had special responsibilities in times like ours for helping these children improve their insights into human relations and the way in which the lives of people are affected by social forces of the period in which they live. Consequently a series of discussions was held in which an effort was made to select procedures and materials which might produce more learning of historical concepts, improvement of reading skills, and illumination of the human aspects of the past.

In 1962 the New York City curriculum guide specified that the second term of the seventh grade social studies program should be devoted to "The Beginnings of America." (Board of Education, Social Studies, Grades 7, 8, 9, A Guide for Teachers, Curriculum Bulletin, Number 5, 1951-52 Series, New York, pp. 17 and 18.) As is often the case, it suggested that Old World backgrounds, the new lands, and the colonization and growth of settlements be taught. The Project participants, believing this content included too much for the 7-3 children, determined to select one group, the Pilgrims; one area, Massachusetts; and the actions of a limited group of people as the focus of attention in social studies. The approach was to emphasize reading, historical content, and human relations concurrently

A book, Squanto and the Pilgrims (Anderson, A. M., Chicago, Wheeler Post Co., 1949), was chosen as the vehicle for this attempt. The outcome indicated that it was a superb choice, for it had many desirable characteristics. It was, of course, set in the period of colonization and brought out clearly the conditions under which the first settlers lived at this time. In addition it was written so that youngsters who read at the third grade level could read and understand it without much difficulty and yet without feeling degraded by its format. But above all it had many exceedingly fruitful episodes in which human relations, especially appropriate for these children, could be explored. For example, as the book opens Squanto is preparing for his initiation into his tribe. The question of how one demonstrates he is ready to assume an adult role in his society could easily and naturally be raised. In the latter part of the book Indian-white relationships occupy the center of attention. Squanto is enslaved, taken to Europe, returns to America, and plays a critical role in the survival of the Pilgrims. These episodes offered opportunity to discuss personal and social problems.

Having selected the book, the four Project members now began to devise appropriate means to capitalize on its possibilities. They agreed on certain guidelines: (1) Procedures should not prevent the pupils from enjoying the story by making the related study laborious and disagreeable. (2) The reader should be able to proceed at his own pace. (3) The reading problems of the pupils should be revealed to the teacher. (4) The group activities should emphasize discussions of human relations problems as well as history content and general reading skills.

With these ideas in mind the planners devised a reading exercise for each of the chapters in the book. These consisted of two parts: five multiple choice questions demanding either recall of simple facts or drawing simple inferences, and five questions on vocabulary. These exercises made it possible for the teacher to keep track of the the progress of each child and to attempt some diagnosis of his reading difficulties. Teacher resource sheets were also devised to help the teacher stimulate interest and to encourage the development of human relation insights and language skills.

The results were encouraging. The children were very much interested in the book and looked forward each day to reading it. The high point as reported by the teacher was one day when one pupil sat with the book closed. Upon being questioned for the reason, she said, "I know Squanto is going to die and I can't bear to read about it." The differences in reading and study skills among the children immediately became apparent. Some read fairly rapidly and with relatively high comprehension. Others labored and gains made one day seemed to disappear the next. As the teacher went about the room helping pupils correct their reading exercises, his awareness of their needs and his own lack of methods and materials to cope with them grew. At the same time the discipline problems decreased somewhat. Pupils were more involved in what they were doing, the clearly specified tasks seemed to meet their need for security, and the individual attention given by the teacher improved teacher-pupil relationships.

Many problems were revealed. Some pupils could not read and needed constant attention. Others cheated on the reading exercises showing that, in spite of all reassurance that the results would not affect their marks, they did not want to reveal their lack of ability. The methods for handling the books and materials were too cumbersome. Perhaps most important of all, the provision for having each proceeding at his own rate produced loose ends which had to be dealt with. The final judgment of the participants, however, was that the procedure was worthy of further exploration.

In the eighth grade planning was begun for using the "Squanto" procedure in studying the period from 1820 to 1865, the Civil War period. It was decided that a frontal attack would now be made on the role of the Negro in American history. After considerable exploration, a book, Arna Bontemps' Frederick Douglass: Slave-Fighter-Freeman (New York, Alfred A. Knopf, 1959) was chosen as the main vehicle of the study. In an effort to provide for the more rapid readers, copies were obtained of Dorothy Sterling's Freedom Train: The Story of Harriet Tubman (Garden City, N. Y., Doubleday and Company, Inc., 1954), Enid Meadowcroft's By Secret Railway (New York, Thomas Y. Crowell Co., 1948), and Emma Gelders Sterne's The Long Black Schooner (New York, Scholastic Book Services, 1961). The last two are works of juvenile fiction. It was hoped that these books would make it possible to reenforce the understanding of the period by seeing it from different perspectives. It was also thought that Harriet Tubman might have special appeal for the girls.

Our assumptions were now a bit clearer. We assumed (1) that the emphasis on Negroes would make it more possible for these predominantly Negro children to identify with the people involved in the events of American history and (2) that reading materials combining a substantial decrease in the conceptual density with an increase in the amount of reading would be more effective in developing historical knowledge, reading skill, and an understanding of human relations in these children than the usual text material.

In our second trial we became more explicit in elaborating our goals, especially in relation to the language arts. We once again prepared simple tests for each of the nineteen chapters of Frederick Douglass. The first three questions on the test asked for simple recall; the second three,for simple inference; and the last four were on vocabulary. In addition, the Project participants prepared a series of suggestions for the teacher, emphasizing oral and writing skills, map skills, preparation of cartoons, time concept exercises, dramatizations, and problems emphasizing logical reasoning. Examples of each are given in this appendix. The first is a reading exercise on Chapter 1 of Frederick Douglass and the other is the set of suggested related exercises for the teacher based on Chapters 1 through 5.

This effort proved even more successful than the reading of Squanto. The pupils were fascinated with the life of Douglass, his childhood as a slave on a plantation and in Baltimore, his fight with a slave-driver, his escape to the North, and his efforts to bring about the end of slavery. One of the most moving sections of the book was related to his efforts to learn to read, efforts which these children could well understand. The related books added flexibility and interest and the more elaborate suggestions to the teacher helped him focus on the unit's goals. Many of the children read two or more of the books.

The participants reenforced many of their ideas about how these children learn. These are mentioned in the body of the report. A few of them may be reiterated here since they were so manifest in the "Squanto-Douglass" project.

1. Lessons for the educationally disadvantaged must have clear goals and simple structure.

2. The exercises must be suitable to the abilities of the pupils. These children especially need repeated success experience

3. The plans should include many ways of reenforcing knowledge: reading materials, individual reading exercises, written work, and oral discussion.

4. The content should emphasize the activities of people. These children are person-oriented, not abstraction-oriented.

5. Reading materials should be extensive, not abbreviated forms of the traditional text.

6. The plans should make it possible for the teacher to deal with each pupil as an individual, diagnosing his difficulties and developing a program to meet his needs.

7. Interracial relations are of great interest to both Negroes and whites and this interest can be used to the achievement of both skill and insight.

READING EXERCISE

Name______________________________Class______________Date__________________________

Number Right______

FREDERICK DOUGLASS

Chapter 1
Under a Tree

DIRECTIONS: Here are six questions. Each one is followed by four possible answers. Select the one which you think is the best answer. Place the letter in front of it before the number of the question. Use capital letters.

_____1. Where were some of the ships going which young Fred watched?

A, To New York
B, To Baltimore
C, To New Orleans
D, To Rio de Janeiro

_____2. What was Grandma Betsey's job?

A. To look after the children
B. To work in the fields
C. To cook for the plantation owners
D. To take care of the chickens

_____3. Why did not Grandma worry when she did not see Fred around the cabin?

A. She knew he was working in the fields.
B. She knew he was in school.
C. She knew that he had gone to see his father.
D. She knew he was watching the sailboats.

_____4. What kind of boy was Fred?

A. He was cruel to animals.
B. He was lazy.
C. He was studious.
D. He was loving and obedient.

_____5. What kind of person was his grandmother?

A. She was kind.
B. She was cruel.
C. She was sad.
D. She was lazy.

_____6. Who was Master Daniel?

A. He was Fred's father.
B. He was the son of the plantation owner.
C. He was the school teacher.
D. He was the captain of the boat which Fred watched.

DIRECTIONS: Here are four sentences taken from Chapter 1. Each one has a word underlined. Below the four sentences are definitions. Select the definition which applies to the underlined word and place its letter in the space before the proper number.

_____7. The tree was on a hill, and there was a green slope all the way down to the water.

_____8. "I'd sure like to go where you're going," Fred added sadly as the boat disappeared.

_____9. All were the children of slavery who worked in the fields all day.

_____10. Fred could not imagine what Master Daniel wanted with him.

A. A hill that is not steep.
B. To go out of sight.
C. A person owned by another person.
D. To think of it in one's head.
E. To walk a long distance.

Suggested Related Exercises

Frederick Douglass

Arna Bontemp

Chapters I-V

Writing Exercises

Slow learners need opportunities to express themselves in writing. The exercises need to be short but frequent. Short exercises may be quickly and easily corrected by the teacher or by other students. They may be read aloud to the class giving additional experience in pronunciation--and in listening. When feasible, the writing should give children a chance to use their imaginations as well as to explain something clearly and to organize their ideas.

Choose one of the following:

1. Write a short description explaining what is happening in the picture on page 20. Who are the characters? What are they saying to each other? What is in the bundles?

2. On page 24 Fred said about Baltimore, "I didn't think it would be like this." Write a paragraph or two telling what you think Fred thought Baltimore would be like.

3. In chapter 4 Fred got very tired waiting while Rich carried on his business with Mr. Curtiss. Did you ever get tired waiting? Write a story of your experience telling about a time you had to wait for someone and how you felt.

4. Write a story with the title "What I think about Mr. Auld."

5. After you have finished Chapter V, write what you think will happen next. (Do not peek into the next chapter.)

6. If you have ever moved to a strange city, write a description of how you felt when you first arrived.

Discussion Questions

Much opportunity should be given to the children to ask questions and to give their spontaneous reactions to the story. However, the teacher should use the discussion period to help clarify ideas, to help children learn to reason, and to find out about the children's beliefs and attitudes. A few sample discussion questions follow.

1. Fred seems to be a very obedient little boy. He didn't seem to mind doing his work and was eager to do everything Master Daniel asked him. Why was this? Do you think a boy today would feel that way if he had jobs like Fred's?

2. Do you think Fred acts older or younger than boys of twelve today? Give your reasons. Did he have more or less freedom than boys today? Give examples from the story.

3. Do you think that the way Fred was treated by his masters was typical of slave life? Have you read or heard any other stories that would make you think that other slave children were treated differently?

4. Do you think Fred was lonesome the first night in Baltimore? Tell about times you were lonesome. How do we get over being lonesome?

Projects

This story offers an opportunity to learn facts and concepts in geography and history. Maps will be included in the packet.

Maps

1. This is a map of the east coast of the United States. Make a small circle with a "B" (B) where you think Baltimore is. Mark an X where you think the plantation was where Fred lived. Make another circle with an "A" (A) for Annapolis. Then trace the route you think the ship took from the plantation to Baltimore.

   (They may have to look on a map in a geography or on wall to get this.)

2. On another map (just like the first one) locate Baltimore, New York, and Boston. From the scale of miles at the bottom figure out how far apart the cities are. If Fred wanted to go to New York, how would he have to go? What method of transportation? About how long would it take? If he lived today, how would he go? How long would it take?

   (This could be done for class discussion using a wall map or a map projected on the overhead projector. Children can make the maps on transparencies and color things.)

Cartoon Stories

In order to see if children understand the sequence of events in a story, the chronology needs to be summarized and reviewed. The following activity could be used at any point the teacher wishes.

1. Make a cartoon series giving the main events in Fred's life that happened in the first two chapters. You could use the picture on page 4 for your first box and then fill in four or five more boxes with pictures of events. You may use stick men for the characters. If you wish to use conversation, you can put the words in balloons like the comic books do.

Time Concept Exercises

Slow learners have very poor time concepts. They need to learn gross periods of time--not specific dates. They need to learn changes that have taken place in ways of living in order to have an understanding of the period. (Civil War)

Assign one chapter to each child so that all five chapters are covered.

1. Make a list of all the things in this chapter that make you know that it took place long ago. (For example--candles for lighting--chiefly horses and boats for transportation)
2. Make a list of all the housekeeping and yard chores (jobs) that Fred had to do that most boys would not have to do today.
3. Do you think Baltimore today looks anything like it did in Fred's time? What were the houses made of? Could the white steps still be there?

   (Maybe this is better for a discussion question. It would give the children an idea of how long things last. . . Make them also think in terms of years and get a gross idea of time.)
4. Make a list of all the things they had to eat. Do we eat these things today? Do they eat them in the south?

Dramatizations

Simple dramatizations are good activities for these children. Junior high age children love to act. It provides for self-expression and gives practice in pronunciation. The suggestion below also provides for teaching the meaning of quotation marks.

In any one chapter such as pages 18, 19, 20, or 34, 35, 36--or 45, 46, 47, assign number of students that there are characters.

1. Copy down all of the sentences inside the quotation marks " ". Assign a student to represent each character. Practice reading the parts to each other and act it out for the class.

Additional Exercises

For learning names--relationships to each other--spelling practice, etc.

1. Make a list of all the characters that appear in this chapter telling who they are. Example Harriet--(Fred's Mother)

    Students could sit in groups of five--each doing one chapter. they they could compile the list and put it on one piece of paper. This would be a simple way to begin group work giving them a chance to select--eliminate duplications, etc.

2. Make a list of all the places (towns, rivers, etc.). Directions same as page before.

    For opportunity for those who wish to paint or model and also use imagination.

    1. Paint a picture of what you think a plantation looked like. Include houses, fields, etc.
    2. Draw a picture of early Baltimore showing the wharf where Fred landed.

Some questions to encourage guessing (Rationale: Some teachers think slow learners can't reason or project. Usually they can on their own level but are seldom given a chance in that most of their school activities have been memorization and rote learning. By pushing and encouraging a child may be taught to leap and to reason--and eventually will learn to relate ideas and concepts.)

1. How many people do you think lived in Baltimore in Fred's time? Is that more or less than live there today? How do you know? Why? Is that more or less than live in Jamaica? What makes a city grow? Is it better to live in a small town or a big city? etc. etc.
2. Why didn't Fred have soap to wash with? Did everybody have soap then? Can you guess when soap was invented? What is it made of?
3. What is meant by Shooing Chickens? Why did they do this?
4. Why don't they have to drive sheep through the streets today?

APPENDIX C

Frequency Distribution
of
Reading Achievement Scores

METROPOLITAN ACHIEVEMENT TESTS

READING GRADE LEVELS

TABLE 2.1

Fall, 1961

Class	Below 3rd	3rd	4th	5th	6th	7th	8th	9th	10th	No. Tested
7-1	-	6	5	3	7	1	1	2	2	27
7-2	-	3	6	7	4	4	2	3	-	29
7-3	6	15	7	-	-	-	-	-	-	28
Total	6	24	18	10	11	5	3	5	2	84

TABLE 2.2

Fall, 1962

Class	Below 3rd	3rd	4th	5th	6th	7th	8th	9th	10th	No. Tested
8-1	-	-	1	3	6	9	3	2	5	29
8-2	-	3	13	8	2	2	-	1	-	29
8-3	-	10	9	7	-	-	1	-	-	27
Total	-	13	23	18	8	11	4	3	5	85

APPENDIX C

TABLE 8.1

Comparison of Total Project and Control Groups on Wechsler Intelligence Scale for Children, First Administration

	Project Group		Control Group		Total Group	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Verbal Scale IQ	89.44	12.49	89.76	11.64	89.62	12.02
Performance Scale IQ	88.35	13.34	92.02	12.06	90.43	12.76
Full Scale IQ	87.84	12.46	89.90	11.42	89.01	11.93
N	85		111		196	

TABLE 8.2

Comparison of Total Project with Control Group by Sexes for Mean IQ's on Wechsler Intelligence Scale for Children, First Administration

	Project Group				Control Group			
	Boys		Girls		Boys		Girls	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Verbal Scale IQ	91.38	11.02	87.71	13.42	89.58	11.00	89.90	12.15
Performance Scale IQ	91.10	13.42	85.91	12.79	92.56	13.17	91.57	13.25
Full Scale IQ	90.38	11.24	85.58	13.05	90.06	9.95	89.77	12.50
N	40		45		50		61	

TABLE 8.3

Mean Grade-Score Achievement on the Metropolitan Achievement Test for the Experimental and Control Populations in the Project School at the Inception of the Project.

	Experimental Group	Control Group
Word Knowledge	4.8	4.8
Reading	4.8	4.8
Spelling	5.5	5.6
Language	4.9	5.0
Language Study Skills	5.0	4.7
Arithmetic Computation	5.7	5.6
Arithmetic Problem Solving & Concepts	5.4	5.3
Social Studies Information	4.8	4.8
Social Studies Study Skills	4.8	4.6
Science	4.8	5.0
Median Grade Score	5.1	5.1
N	85	111

TABLE 8.4

Comparability of Initial Experimental and Control Groups in Intelligence and Achievement Using Discriminant Function Analysis

	f_1	f_2	F Ratio	P
Wechsler Intelligence Scale for Children (11 sub-tests)	11	184	1.59	>.10
Metropolitan Achievement Test (all sub-tests)	10	185	1.08	>.10

Experimental Group N = 85
Control Group N = 111

TABLE 8.5

Comparability of Initial Project and Control Groups by Sex on a Combination of Intelligence and Achievement, First Administration, By Discriminant Function Analysis

	f_1	f_2	F Ratio	P
Wechsler Intelligence Scale for Children and Metropolitan Achievement Test combined. (21 sub-tests)				
Boys only	21	68	1.01	>.10
Girls only	21	84	1.36	>.10

N:				
	Experimental boys,	40;	Experimental girls,	45;
	Control boys,	50;	Control girls,	61.

TABLE 8.6

Comparability of Final Project and Control Groups in Initial Intelligence and Achievement by Discriminant Function Analysis

	f_1	f_2	F Ratio	P
Wechsler Intelligence Scale for Children (11 sub-tests)	11	120	1.88	.05 >.025
Metropolitan Achievement Test (all sub-tests)	10	121	.78	>.10
WISC and MAT combined (21 sub-tests)	21	110	1.49	.10 >.05

Experimental Group N = 59
Control Group N = 73

TABLE 8.7

Mean Initial Intelligence and Achievement Scores for Entire Beginning Groups Compared with Groups Remaining to the End of the Project

	Project Group		Control Group		Difference	
Measure	Entering	Remaining	Entering	Remaining	Entering	Remaining
WISC Verbal IQ	89.4	90.7	89.8	92.4	0.4	1.7
Performance IQ	88.4	90.6	92.0	94.7	3.6	4.1
Full Scale IQ	87.8	89.7	89.9	92.8	2.1	3.1
Metropolitan Median G.E.	5.1	5.2	5.1	5.3	0.0	0.1
N	85	57	111	73		

TABLE 8.8

Mean Initial IQ and Achievement Scores for Final Project and Control Groups, by Sex

Measure	Project		Project	
	Boys	Girls	Boys	Girls
WISC Verbal IQ	94.25	87.31	91.47	93.07
" Performance IQ	93.04	88.17	94.81	94.68
" Full Scale IQ	93.00	86.52	92.31	93.24
Metropolitan Median G.S.	5.52	4.90	4.97	5.61
N	28	29	32	41

TABLE 8.9

Comparison of the Project and Control Boys on the Wechsler Intelligence Scale for Children, First Test and Retest

	Project Group (Boys)		Control Group (Boys)		Difference in Means
	Mean	S.D.	Mean	S.D.	
First Test - 7th Grade					
Verbal Scale IQ	94.25	10.94	91.47	11.56	+ 2.78
Perf'm. Scale IQ	93.04	11.30	94.81	9.84	- 1.77
Full Scale IQ	93.00	10.24	92.31	9.71	+ 0.69
Retest - 9th Grade					
Verbal Scale IQ	100.25	11.56	91.75	11.01	+ 8.50 @
Perf'm. Scale IQ	96.25	8.86	97.84	11.65	- 1.59
Full Scale IQ	98.31	8.96	94.09	10.69	+ 4.22 *
Changes - 7th to 9th Grade					
Verbal Scale IQ	+ 6.00	6.49	+ 0.28	5.66	+ 5.72 @
Perf'm. Scale IQ	+ 3.21	6.99	+ 3.03	6.12	+ 0.18
Full Scale IQ	+ 5.32	5.77	+ 1.78	4.97	+ 3.54 @
N d.f. = 58	28		32		

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.10

Comparison of the Project and Control Girls on the Wechsler Intelligence Scale for Children, First Test and Retest

	Project Group (Girls)		Control Group (Girls)		Difference in Means
	Mean	S.D.	Mean	S.D.	
First test - 7th Grade					
Verbal Scale IQ	87.31	12.84	93.07	10.95	- 5.76 #
Perf'm. Scale IQ	88.17	12.76	94.68	13.21	- 6.51 #
Full Scale IQ	86.52	12.69	93.24	11.46	- 6.72 #
Retest - 9th Grade					
Verbal Scale IQ	90.31	12.58	94.41	11.95	- 4.10
Perf'm. Scale IQ	93.55	14.00	96.61	11.27	- 3.06
Full Scale IQ	90.79	12.69	95.05	10.58	- 4.26
Changes - 7th to 9th Grade					
Verbal Scale IQ	+ 3.00	5.80	+ 1.34	5.84	+ 1.66
Perf'm. Scale IQ	+ 5.38	7.83	+ 1.93	7.62	+ 3.45
Full Scale IQ	+ 4.28	5.55	+ 1.80	5.50	+ 2.48
N d.f. = 68	29		41		

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.11

Comparison of WISC IQ Gains for Total Project and Control Groups

	Mean IQ Gain		S.D.			
	Project	Control	Project	Control	t	p
Verbal IQ	4.81	0.94	6.44	5.99	3.38	< .01
Performance IQ	4.92	2.67	7.83	7.34	1.58	> .10
Full Scale IQ	5.25	1.96	5.74	5.48	3.16	< .01

TABLE 8.12

Changes on Retest with the Wechsler Intelligence Scale for Children in Project and Control Group Boys with Low First Administration Verbal IQ (below 85)

	Project Group (Boys)		Control Group (Boys)		Mean Difference
	Mean	S.D.	Mean	S.D.	
First Test - 7th Grade					
Verbal Scale IQ	78.50	4.19	78.50	5.37	0
Perf'm. Scale IQ	84.83	8.90	92.50	7.30	- 7.67
Full Scale IQ	79.50	4.19	83.50	3.67	- 4.00 *
Second Test - 9th Grade					
Verbal Scale IQ	86.00	6.76	80.40	5.25	+ 5.60
Perf'm. Scale IQ	92.33	6.85	96.40	8.08	- 4.07
Full Scale IQ	88.00	3.87	86.80	5.69	+ 1.20
Changes - 7th to 9th Grade					
Verbal Scale IQ	+ 7.50		+ 1.90		+ 5.60
Perf'm. Scale IQ	+ 7.50		+ 3.90		+ 3.60
Full Scale IQ	+ 8.50		+ 3.30		+ 5.20
N	6		10		
d.f. = 14					

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.13

Changes on Retest with the Wechsler Intelligence Scale for Children in Project and Control Group Boys with Middle First Administration Verbal IQ (from 85-94)

	Project Group (Boys)		Control Group (Boys)		Mean Difference
	Mean	S.D.	Mean	S.D.	
First Test - 7th Grade					
Verbal Scale IQ	89.43	1.99	89.44	2.22	- 0.01
Perf'm. Scale IQ	89.29	5.85	90.78	9.11	- 1.49
Full Scale IQ	88.14	2.95	89.00	4.99	- 0.86
Second Test - 9th Grade					
Verbal Scale IQ	94.00	3.85	89.33	5.85	+ 4.67
Perf'm. Scale IQ	93.14	6.75	92.22	12.12	+ 0.92
Full Scale IQ	93.00	4.04	89.67	8.97	+ 3.33
Changes - 7th to 9th Grade					
Verbal Scale IQ	+ 4.57		- 0.11		+ 4.68
Perf'm. Scale IQ	+ 3.85		+ 1.44		+ 2.41
Full Scale IQ	+ 4.86		+ 0.67		+ 4.19
N	7		9		
d.f. = 14					

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.14

Changes on Retest with the Wechsler Intelligence Scale for Children in Project and Control Group Boys with High First Administration Verbal IQ (95 and up)

	Project Group (Boys)		Control Group (Boys)		Mean Difference
	Mean	S.D.	Mean	S.D.	
First Test - 7th Grade					
Verbal Scale IQ	102.80	5.59	102.85	6.47	- 0.85
Perf'm. Scale IQ	98.07	11.49	99.38	10.19	- 1.31
Full Scale IQ	100.67	6.48	101.38	7.41	- 0.71
Second Test - 9th Grade					
Verbal Scale IQ	108.87	7.13	102.15	6.49	+ 6.72 #
Perf'm. Scale IQ	99.27	9.32	102.85	11.55	- 3.58
Full Scale IQ	104.93	6.05	102.77	8.41	+ 2.16
Changes - 7th to 9th Grade					
Verbal Scale IQ	+ 6.07		- 0.70		+ 6.77
Perf'm. Scale IQ	+ 1.20		+ 3.47		- 2.27
Full Scale IQ	+ 4.26		+ 1.39		+ 2.87
N d.f. = 26	15		13		

* .10 > .05

# .05 > .01

@ < .01

TABLE 8.15

Changes on Retest with the Wechsler Intelligence Scale for Children in Project and Control Group Girls with Low First Administration Verbal IQ (below 85)

	Project Group (Girls)		Control Group (Girls)		Mean Difference
	Mean	S.D.	Mean	S.D.	
First Test - 7th Grade					
Verbal Scale IQ	75.92	3.62	80.00	4.00	- 4.08 #
Perf'm. Scale IQ	80.92	8.39	82.00	9.53	- 1.08
Full Scale IQ	76.25	5.82	79.00	5.46	- 2.75
Second Test - 9th Grade					
Verbal Scale IQ	79.92	5.41	80.55	6.02	- 0.63
Perf'm. Scale IQ	86.83	10.02	86.45	10.46	+ 0.38
Full Scale IQ	81.50	7.58	81.64	7.09	- 0.14
Changes - 7th to 9th Grade					
Verbal Scale IQ	+ 4.00		+ 0.55		+ 3.45
Perf'm. Scale IQ	+ 5.91		+ 4.45		+ 1.46
Full Scale IQ	+ 5.25		+ 2.64		+ 2.61
N	12		11		
d.f. = 21					

* .10 > .05

# .05 > .01

@ < .01

TABLE 8.16

Changes on Retest with the Wechsler Intelligence Scale for Children in Project and Control Group Girls with Middle First Administration Verbal IQ (between 85-94)

	Project Group (Girls)		Control Group (Girls)		Mean Difference
	Mean	S.D.	Mean	S.D.	
First Test - 7th Grade					
Verbal Scale IQ	88.00	2.49	89.09	1.83	- 1.09
Perf'm. Scale IQ	90.00	12.70	93.55	6.91	- 3.55
Full Scale IQ	87.64	7.07	90.27	3.98	- 2.63
Second Test - 9th Grade					
Verbal Scale IQ	91.45	4.03	92.09	4.34	- 0.64
Perf'm. Scale IQ	97.45	16.88	97.64	5.61	- 0.19
Full Scale IQ	93.18	10.59	94.45	3.39	- 1.32
Changes - 7th to 9th Grade					
Verbal Scale IQ	+ 3.45		+ 3.00		+ 0.45
Perf'm. Scale IQ	+ 7.45		+ 4.09		+ 3.36
Full Scale IQ	+ 5.49		+ 4.18		+ 1.31
N		11		11	
d.f. = 20					

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.17

Changes on Retest with the Wechsler Intelligence Scale for Children in Project and Control Group Girls with High First Administration Verbal IQ (95 and higher)

	Project Group (Girls)		Control Group (Girls)		Mean Difference
	Mean	S.D.	Mean	S.D.	
First Test - 7th Grade					
Verbal Scale IQ	108.83	6.01	102.95	6.48	+ 5.88 *
Perf'm. Scale IQ	99.33	10.72	102.68	11.77	- 3.35
Full Scale IQ	105.00	7.98	103.21	5.93	+ 1.79
Second Test - 9th Grade					
Verbal Scale IQ	109.00	10.41	103.79	8.61	+ 5.21
Perf'm. Scale IQ	99.83	8.11	101.89	10.20	- 2.06
Full Scale IQ	105.00	8.50	103.16	5.98	+ 1.84
Changes - 7th to 9th Grade					
Verbal Scale IQ	+ 0.17		+ 0.84		- 0.67
Perf'm. Scale IQ	+ 0.50		- 0.79		+ 1.29
Full Scale IQ	0		- 0.05		+ 0.05
N		6		19	
d.f. = 23					

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.18

Percentages of Project and Control Groups Showing a Large IQ Gain or a Loss

	Gains of 10 or more points		No gain or loss	
	Project	Control	Project	Control
Verbal IQ	21%	7%	21%	37%
Performance IQ	30%	15%	19%	32%
Full Scale IQ	21%	4%	16%	34%
N	57	73	57	53

TABLE 8.19

Median Grade Scores on All Administrations of the Metropolitan Achievement Test in the Project and Control Groups Present for all Four Administrations

	Project Group Mean	Project Group S. D.	Control Group Mean	Control Group S. D.	Difference In Means
Administration					
Oct. 1961	5.20	1.44	5.33	1.21	- 0.13
May 1962	5.99	1.77	6.22	1.55	- 0.23
May 1963	6.43	1.85	6.79	1.70	- 0.36
May 1964	7.10	1.83	7.31	1.78	- 0.21
N	57		73		

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.20

Gains in Median Grade Scores Between Successive Administrations of the Metropolitan Achievement Test, and Total Gain, in the Project and Control Groups Present for All Four Administrations

Administration	Project Group	Control Group	Difference
Oct. 1961 to May 1962	+ 0.79	+ 0.89	- 0.10
May 1962 to May 1963	+ 0.44	+ 0.57	- 0.13
May 1963 to May 1964	+ 0.67	+ 0.52	+ 0.15
Oct. 1961 to May 1964	+ 1.90	+ 1.98	- 0.08
N	57	73	

TABLE 8.21

Mean Standard Score Achievement and Gains for Project, Control and Control II Groups

Mean Standard Score	Project Group Mean	Project Group S.D.	Control Group Mean	Control Group S.D.	Control II Group Mean	Control II Group S.D.
Oct. 1961	44.36	10.35	44.82	9.23	44.31	8.89
May 1964	54.81	10.83	55.34	10.95	50.36	7.68
Gain	10.45	4.34	10.52	4.63	6.05	5.74
N	56		71		44	

TABLE 8.22

Mean Standard Score Achievement and Gain for Project, Control, and Control II Boys

Mean Standard Score	Project Boys Mean	Project Boys S.D.	Control Boys Mean	Control Boys S.D.	Control II Boys Mean	Control II Boys S. D.
Oct. 1961	47.21	10.28	42.13	8.87	44.39	9.23
May 1964	58.18	9.95	52.95	10.58	51.31	9.03
Gain	10.97	4.23	10.82	4.38	6.92	5.18
N	27		32		26	

TABLE 8.23

Mean Standard Score Achievement and Gain for Project, Control, and Control II Girls

Mean Standard Score	Project Girls Mean	Project Girls S.D.	Control Girls Mean	Control Girls S.D.	Control II Girls Mean	Control II Girls S.D.
Oct. 1961	41.71	9.68	47.03	8.94	44.18	8.37
May 1964	51.67	10.68	57.31	10.86	48.99	4.82
Gain	9.96	4.38	10.28	4.81	4.81	6.26
N	29		3.9		18	

TABLE 8.24

Median Grade Scores on All Administrations of the Metropolitan Achievement Test for the Project and Control Boys Present for All Four Administrations with "Low" Initial WISC Verbal IQ (below 85)

	Project Group (Boys)		Control Group (Boys)		Difference in Means
	Mean	S.D.	Mean	S.D.	
Administration					
Oct. 1961	3.73	0.44	4.20	0.94	- 0.47
May 1962	4.40	0.53	4.76	0.81	- 0.36
May 1963	4.70	0.50	5.12	0.75	- 0.42
May 1964	5.03	0.76	5.53	0.92	- 0.50
N d.f. = 14	6		10		

*	.10	> .05
#	.05	> .01
@		< .01

TABLE 8.25

Median Grade Scores on All Administrations of the Metropolitan Achievement Test for the Project and Control Boys Present for All Four Administrations with "Middle" Initial WISC Verbal IQ (between 85-94)

	Project Group (Boys)		Control Group (Boys)		Difference in Means
	Mean	S.D.	Mean	S.D.	
Administration					
Oct. 1961	4.70	0.75	4.73	0.75	- 0.03
May 1962	5.57	0.97	5.31	0.92	+ 0.26
May 1963	5.64	1.15	5.83	1.18	- 0.19
May 1964	6.71	0.98	6.36	1.41	+ 0.35
N d.f. = 14	7		9		

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.26

Median Grade Scores on All Administrations of the Metropolitan Achievement Test for the Project and Control Boys Present for All Four Administrations with "High" Initial WISC Verbal IQ (95 and up)

	Project Group (Boys)		Control Group (Boys)		Difference in Means
	Mean	S.D.	Mean	S.D.	
Administration					
Oct. 1961	6.62	1.06	5.72	1.09	+ 0.90 #
May 1962	7.61	1.53	6.87	1.35	+ 0.74
May 1963	8.05	1.35	7.63	1.32	+ 0.42
May 1964	8.85	0.85	8.42	1.36	+ 0.43
N d.f. = 26	15		13		

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.27

Median Grade Scores on All Administrations of the Metropolitan Achievement Test for the Project and Control Girls Present for All Four Administrations with "Low" Initial WISC Verbal IQ (below 85)

	Project Group (Girls)		Control Group (Girls)		Difference
	Mean	S.D.	Mean	S.D.	
Administration					
Oct. 1961	4.04	0.60	4.35	0.65	- 0.31
May 1962	4.52	0.77	4.84	0.67	- 0.32
May 1963	4.73	0.59	5.08	0.86	- 0.35
May 1964	5.22	0.76	5.65	0.95	- 0.43
N d.f. = 21	12		11		

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.28

Median Grade Scores on All Administrations of the Metropolitan Achievement Test for the Project and Control Girls Present for All Four Administrations with "Middle" Initial WISC Verbal IQ (from 85 to 94)

	Project Group (Girls)		Control Group (Girls)		Difference
	Mean	S.D.	Mean	S.D.	
Administration					
Oct. 1961	4.97	1.11	5.37	0.62	– 0.40
May 1962	5.61	1.13	6.16	0.59	– 0.55
May 1963	6.31	1.21	6.82	0.92	– 0.51
May 1964	7.15	1.39	7.15	0.98	0
N d.f. = 20	11		11		

* $.10 > .05$
# $.05 > .01$
@ $< .01$

TABLE 8.29

Median Grade Scores on All Administrations of the Metropolitan Achievement Test for the Project and Control Girls Present for All Four Administrations with "High" Initial WISC Verbal IQ (95 and up)

	Project Group (Girls)		Control Group (Girls)		Difference
	Mean	S.D.	Mean	S.D.	
Administration					
Oct. 1961	6.47	1.14	6.48	0.87	- 0.01
May 1962	7.68	1.54	7.81	1.15	- 0.13
May 1963	8.67	1.34	8.54	0.94	+ 0.13
May 1964	8.87	1.11	8.99	1.01	- 0.12
N d.f. = 23	6		19		

*	.10	> .05
#	.05	> .01
@		< .01

TABLE 8.30

Gains in Median Grade Scores Between Successive Administrations of the Metropolitan Achievement Test, and Total Gain, in the Project and Control Boys Present for All Four Administrations with "Low" Initial WISC Verbal IQ (Below 85)

	Project Group (Boys)		Control Group (Boys)		Difference In Means
	Mean	S.D.	Mean	S.D.	
Period					
Oct. 1961 - May 1962	0.67	0.60	0.56	0.40	+ 0.11
May 1962 - May 1963	0.30	0.42	0.36	0.42	- 0.06
May 1963 - May 1964	0.33	0.49	0.41	0.36	- 0.08
Oct. 1961 - May 1964	1.30	0.70	1.33	0.36	- 0.03
N d.f. = 14	6		10		

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.31

Gains in Median Grade Scores Between Successive Administrations of the Metropolitan Achievement Test, and Total Gain, in the Project and Control Boys Present for All Four Administrations with "Middle" Initial WISC Verbal IQ (between 85 & 94)

	Project Group (Boys)		Control Group (Boys)		Difference In Means
	Mean	S.D.	Mean	S.D.	
Period					
Oct. 1961 - May 1962	0.87	0.37	0.58	0.42	+ 0.29
May 1962 - May 1963	0.07	0.42	0.52	0.47	- 0.45 *
May 1963 - May 1964	1.07	0.40	0.52	0.46	+ 0.55 #
Oct. 1961 - May 1964	2.01	0.40	1.62	0.78	+ 0.39
N	7		9		
d.f. = 14					

* $.10 > .05$
# $.05 > .01$
@ $< .01$

TABLE 8.32

Gains in Median Grade Scores Between Successive Administrations of the Metropolitan Achievement Test, and Total Gain, in the Project and Control Boys Present for All Four Administrations with "High" Initial WISC Verbal IQ (95 and up)

	Project Group (Boys)		Control Group (Boys)		Difference In Means
	Mean	S.D.	Mean	S.D.	
Period					
Oct. 1961 - May 1962	0.99	0.77	1.15	0.67	- 0.16
May 1962 - May 1963	0.45	0.68	0.76	0.60	- 0.31
May 1963 - May 1964	0.80	0.77	0.78	0.70	+ 0.02
Oct. 1961 - May 1964	2.23	0.66	2.69	0.81	- 0.46 *
N d.f. = 26	15		13		

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.33

Gains in Median Grade Scores Between Successive Administrations of the Metropolitan Achievement Test, and Total Gain, in the Project and Control Girls Present for All Four Administrations with "Low" Initial WISC Verbal IQ (below 85)

	Project Group (Girls)		Control Group (Girls)		Difference In Means
	Mean	S.D.	Mean	S.D.	
Period					
Oct. 1961 - May 1962	0.48	0.32	0.49	0.55	- 0.01
May 1962 - May 1963	0.21	0 41	0.25	0.48	- 0.04
May 1963 - May 1964	0.49	0.35	0.57	0.34	- 0.08
Oct. 1961 - May 1964	1.18	0.42	1.31	0.73	- 0.11
N d.f. = 21	12		11		

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.34

Gains in Median Grade Scores Between Successive Administrations of the Metropolitan Achievement Test, and Total Gain, in the Project and Control Girls Present for All Four Administrations with "Middle" Initial WISC Verbal IQ (between 85 & 94)

	Project Group (Girls)		Control Group (Girls)		Difference In Means
	Mean	S.D.	Mean	S.D.	
Period					
Oct. 1961 - May 1962	0.64	0.36	0.79	0.62	- 0.15
May 1962 - May 1963	0.70	0.58	0.65	0.67	+ 0.05
May 1963 - May 1964	0.85	0.46	0.33	0.46	+ 0.52 #
Oct. 1961 - May 1964	2.18	0.66	1.77	0.79	+ 0.41
N	11		11		
d.f. = 20					

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.35

Gains in Median Grade Scores Between Successive Administrations of the Metropolitan Achievement Test, and Total Gain, in the Project and Control Girls Present for All Four Administrations with "High" Initial WISC Verbal IQ (95 and up)

	Project Group (Girls)		Control Group (Girls)		Difference In Means
	Mean	S.D.	Mean	S.D.	
Period					
Oct. 1961 - May 1962	1.22	0.67	1.22	0.70	0
May 1962 - May 1963	0.98	0.61	0.72	0.54	+ 0.26
May 1963 - May 1964	0.20	0.52	0.45	0.62	- 0.25
Oct. 1961 - May 1964	2.40	0.55	2.39	0.84	+ 0.01
N d.f. = 23	6		19		

* .10 > .05
# .05 > .01
@ < .01

TABLE 8.36

Standard Score Means and Standard Deviations for Metropolitan Achievement Test for Project Group Boys Present for All Four Administrations

	Oct. 1961		May 1962		May 1963		May 1964	
	Mean	S. D.	Mean	S. D.	Mean	S. D.	Mean	S. D.
Word Knowledge	46.0	11.3	48.8	12.1	52.0	11.5	55.7	10.9
Reading	45.4	11.0	50.4	10.9	51.8	10.2	55.8	9.2
Spelling	47.5	12.8	53.0	14.6	53.5	12.5	57.2	14.6
Language	41.3	9.1	44.8	12.1	49.4	11.3	49.5	9.2
Language Study Skills	44.3	9.9	50.2	13.3	50.3	11.2	54.6*	10.2
Arithmetic Computation	48.0	13.8	53.0	15.3	54.4	12.9	59.8	15.3
Arithmetic Problem Solving and Concepts	47.1	9.6	51.4	10.4	54.1	12.2	58.8*	9.8
Social Studies Information	46.0	9.6	51.4	10.0	52.6	9.3	59.4	7.4
Social Studies Study Skills	43.0	7.2	51.0	8.8	50.7	9.9	54.9	9.8
Science	45.6	11.1	49.4	10.4	55.0	9.5	58.0	10.5

N = 28

*N = 27

TABLE 8.37

Standard Score Means and Standard Deviations for Metropolitan Achievement Test for Control Group Boys Present for All Four Administrations

	Oct. 1961		May 1962		May 1963		May 1964	
	Mean	S. D.	Mean	S. D.	Mean	S. D.	Mean	S. D.
Word Knowledge	41.0	9.0	44.4	8.1	48.8	8.8	51.7	9.1
Reading	41.0	8.9	46.3	8.7	50.5	10.1	52.3	10.0
Spelling	44.8	8.5	48.4	11.2	50.8	10.4	53.9	12.2
Language	40.1	7.3	44.0	7.8	47.9	9.6	52.0*	9.6
Language Study Skills	40.2	11.5	44.8	11.3	49.6	12.7	52.4*	12.1
Arithmetic Computation	42.3	10.3	52.4	14.6	49.8	13.9	55.0*	16.1
Arithmetic Problem Solving & Concepts	43.4	10.6	49.4	10.8	50.3	11.4	52.9*	11.9
Social Studies Information	42.3	8.4	47.5	8.7	50.6	9.2	53.9**	10.1
Social Studies Study Skills	41.4	8.6	49.7	7.8	50.1	8.7	54.3**	8.9
Science	40.7	7.5	45.4	8.3	51.7	8.1	53.0**	10.5

N = 32

*N = 31
**N = 30

TABLE 8.38

Grade Score Means for the Metropolitan Achievement Test for Project Group Boys Present for All Four Administrations

	Oct. 1961	May 1962	May 1963	May 1964
Word Knowledge	5.5	6.0	6.6	7.5
Reading	5.2	6.2	6.5	7.6
Spelling	5.7	6.7	6.8	7.4
Language	4.9	5.4	6.0	6.0
Language Study Skills	5.2	6.2	6.3	7.1*
Arithmetic Computation	6.0	6.4	6.5	7.0
Arithmetic Problem Solving & Concepts	5.7	6.3	6.7	7.3*
Social Studies Information	5.4	6.4	6.7	8.6
Social Studies Study Skills	4.8	6.3	6.2	7.1
Science	5.5	6.1	7.1	7.6

N = 28

* N = 27

TABLE 8.39

Grade Score Means for the Metropolitan Achievement Test for Control Group Boys Present for All Four Administrations

	Oct. 1961	May 1962	May 1963	May 1964
Word Knowledge	4.5	5.2	6.0	6.5
Reading	4.5	5.4	6.2	6.7
Spelling	5.3	5.8	6.3	6.8
Language	4.8	5.3	5.8	6.5*
Language Study Skills	4.5	5.3	6.1	6.7*
Arithmetic Computation	5.5	6.3	6.1	6.6*
Arithmetic Problem Solving & Concepts	5.3	6.0	6.2	6.5*
Social Studies Information	4.7	5.7	6.3	7.0**
Social Studies Study Skills	4.6	6.0	6.1	6.9**
Science	4.8	5.4	6.5	6.8**
N= 32				

* N = 31
** N = 30

TABLE 8.40

Gains in Grade Score Equivalents on the Metropolitan Achievement Test for Project Group Boys Present for All Four Administrations

	Oct. 1961 to May 1962	May 1962 to May 1963	May 1963 to May 1964	Total Gain
Word Knowledge	0.5	0.6	0.9	2.0
Reading	1.0	0.3	1.1	2.4
Spelling	1.0	0.1	0.6	1.7
Language	0.5	0.6	0.0	1.1
Language Study Skills	1.0	0.1	0.8	1.9
Arithmetic Computation	0.4	0.1	0.5	1.0
Arithmetic Problem Solving & Concepts	0.6	0.4	0.6	1.6
Social Studies Information	1.0	0.3	1.9	3.2
Social Studies Study Skills	1.5	- 0.1	0.9	2.3
Science	0.6	1.0	0.5	2.1

TABLE 8.41

Gains in Grade Score Equivalents on the Metropolitan Achievement Test for Control Group Boys Present for All Four Administrations

	Oct. 1961 to May 1962	May 1962 to May 1963	May 1963 to May 1964	Total Gain
Word Knowledge	0.7	0.8	0.5	2.0
Reading	0.9	0.8	0.5	2.2
Spelling	0.5	0.5	0.5	1.5
Language	0.5	0.5	0.7	1.7
Language Study Skills	0.8	0.8	0.6	2.2
Arithmetic Computation	0.8	- 0.2	0.5	1.1
Arithmetic Problem Solving & Concepts	0.7	0.2	0.3	1.2
Social Studies Information	1.0	0.6	0.7	2.3
Social Studies Study Skills	1.4	0.1	0.8	2.3
Science	0.6	1.1	0.3	2.0

TABLE 8.42

Standard Score Means and Standard Deviations for the Metropolitan Achievement Test for Project Group Girls Present for All Four Administrations

	Oct. 1961		May 1962		May 1963		May 1964	
	Mean	S. D.	Mean	S. D.	Mean	S. D.	Mean	S. D.
Word Knowledge	39.7	9.5	42.6	10.4	47.7	11.1	50.0	10.2
Reading	41.1	9.7	45.6	7.6	47.4	10.3	50.7	10.5
Spelling	44.9	11.6	51.4	13.9	51.0	12.0	56.2	11.9
Language	41.5	9.8	45.2	9.8	48.4	9.7	50.6	10.8
Language Study Skills	42.1	9.0	45.8	12.3	48.8	13.3	53.8	9.6
Arithmetic Computation	43.9	13.8	49.2	15.3	50.7	15.8	53.8	14.8
Arithmetic Problem Solving & Concepts	42.2	9.9	46.4	10.5	48.7	12.1	52.2	11.7
Social Studies Information	41.4	9.3	43.5	10.6	46.9	7.9	50.5	10.7
Social Studies Study Skills	41.1	8.2	46.2	10.1	48.5	9.2	49.9	8.7
Science	38.4	8.6	43.4	10.1	47.3	7.3	51.3	9.6

N = 29

TABLE 8.43

Standard Score Means and Standard Deviations for the Metropolitan Achievement Test for Control Group Girls Present for All Four Administrations

	Oct. 1961		May 1962		May 1963		May 1964	
	Mean	S. D.	Mean	S. D.	Mean	S. D.	Mean	S. D.
Word Knowledge	45.9	8.8	49.2	10.7	53.5*	9.0	56.3	9.8
Reading	47.3	9.8	50.7	8.1	54.2*	10.9	55.6	8.4
Spelling	51.6	9.9	57.0	11.9	58.6*	8.8	63.4	10.5
Language	46.3	8.5	50.8	8.6	57.6*	10.4	57.3*	10.9
Language Study Skills	44.9	9.2	50.0	10.1	54.1*	13.0	59.3**	12.6
Arithmetic Computation	48.9	12.8	57.8	14.9	56.3*	15.5	59.4**	17.2
Arithmetic Problem Solving & Concepts	46.6	9.9	52.9	10.5	53.0*	11.5	56.5**	11.7
Social Studies Information	46.1	8.4	52.3	9.7	52.6*	8.8	56.1**	9.7
Social Studies Study Skills	42.5	6.9	50.6	8.4	51.7*	8.9	53.2**	8.3
Science	44.0	6.9	48.7	7.1	51.8*	8.7	51.9**	8.8

N = 41

* N = 40
** N = 39

TABLE 8.44

Grade Score Means on the Metropolitan Achievement Test for Project Group Girls Present for All Four Administrations

	Oct. 1961	May 1962	May 1963	May 1964
Word Knowledge	4.3	4.8	5.8	6.2
Reading	4.5	5.2	5.6	6.3
Spelling	5.3	6.4	6.3	7.1
Language	5.0	5.4	5.8	6.2
Language Study Skills	4.8	5.4	5.9	7.0
Arithmetic Computation	5.6	6.0	6.2	6.5
Arithmetic Problem Solving & Concepts	5.1	5.6	5.9	6.4
Social Studies Information	4.5	4.9	5.6	6.3
Social Studies Study Skills	4.5	5.3	5.8	6.1
Science	4.5	5.1	5.7	6.5

N = 29

TABLE 8.45

Grade Score Means on the Metropolitan Achievement Test for Control Group Girls Present for All Four Administrations

	Oct. 1961	May 1962	May 1963	May 1964
Word Knowledge	5.5	6.0	7.0 *	7.7
Reading	5.6	6.2	7.1 *	7.5
Spelling	6.4	7.3	7.7 *	9.1
Language	5.6	6.3	7.4 *	7.3 *
Language Study Skills	5.3	6.2	7.0 *	8.4 **
Arithmetic Computation	6.0	6.8	6.7 *	6.9 *
Arithmetic Problem Solving & Concepts	5.7	6.5	6.5 *	7.1 **
Social Studies Information	5.4	6.7	6.7 *	7.5 *
Social Studies Study Skills	4.8	6.2	6.4 *	6.6 **
Science	5.2	5.9	6.6 *	6.6 *
N = 41				

* N = 40
** N = 39

TABLE 8.46

Gains in Grade Score Equivalents on the Metropolitan Achievement Test for Project Group Girls Present for All Four Administrations

	Oct. 1961 to May 1962	May 1962 to May 1963	May 1963 to May 1964	Total Gain
Word Knowledge	0.5	1.0	0.4	1.9
Reading	0.7	0.4	0.7	1.8
Spelling	1.1	- 0.1	0.8	1.8
Language	0.4	0.4	0.4	1.2
Language Study Skills	0.6	0.5	1.1	2.2
Arithmetic Computation	0.4	0.2	0.3	0.9
Arithmetic Problem Solving & Concepts	0.5	0.3	0.5	1.3
Social Studies Information	0.4	0.7	0.7	1.8
Social Studies Study Skills	0.8	0.5	0.3	1.6
Science	0.6	0.6	0.8	2.0

TABLE 8.47

Gains in Grade Score Equivalent on the Metropolitan Achievement Test for Control Girls Present for All Four Administrations

	Oct. 1961 to May 1962	May 1962 to May 1963	May 1963 to May 1964	Total Gain
Word Knowledge	0.5	1.0	0.7	2.2
Reading	0.6	0.9	0.4	1.9
Spelling	0.9	0.4	1.4	2.7
Language	0.7	1.1	- 0.1	1.7
Language Study Skills	0.9	0.8	1.4	3.1
Arithmetic Computation	0.8	- 0.1	0.2	0.9
Arithmetic Problem Solving & Concepts	0.8	0.0	0.6	1.4
Social Studies Information	1.3	0.0	0.8	2.1
Social Studies Study Skills	1.4	0.2	0.2	1.8
Science	0.7	0.7	0.0	1.4

TABLE 8.48

Mean Years of Prior Experience for Project and Control Teachers

Subject Taught	1961-62		1962-63		1963-64	
	P	C	P	C	P	C
English	1	6.5	2	5.9	3	4.5
Social Studies	0	3.0	1	6.8	2	4.0
Mathematics	2	3.5	3	7.8	4	5.0
Science	2	13.0	3	5.3	4	5.0

TABLE 9.1

Results of the Wechsler Intelligence Scale for Children for Total Seventh Grade Population

	Mean	S.D.	Range
Verbal IQ	89.62	12.02	61-116
Performance IQ	90.43	12.76	50-125
Full Scale IQ	89.01	13.90	67-115
Sub-tests (standard scores)			
1. Information	7.54	2.27	
2. Comprehension	9.15	2.65	
3. Arithmetic A A	8.47	2.27	
4. Similarities	8.10	2.55	
5. Vocabulary	7.51[1]	2.69	
6. Digit span	9.21	2.56	
7. Picture completion	9.23[1]	2.74	
8. Picture arrangement	9.11	2.49	
9. Block design	8.14	2.59	
10. Object assembly	7.74	2.53	
11. Coding	8.93	2.86	

N = 196

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[1] Differences between these means are significant at the .01 level.

TABLE 9.2

Results on Several Intelligence Tests for all Children with Complete Testing

Test	IQ Mean	IQ S.D.
Pintner-Cunningham (Grade 1)	97.62	13.07
Otis Quick-Scoring, Alpha (Grade 3)	93.80	12.28
Otis Quick-Scoring, Beta (Grade 6)	88.15	11.25
Cattell Culture-Fair, Scale 2 (Grade 8)	96.29	15.43
Pintner General Ability, Intermed. (Grade 8)	91.97	15.94
WISC Full Scale (Grade 7)	92.97	11.52

N = 79

TABLE 9.3

Correlations of Group Tests with WISC and with Metropolitan Reading

	WISC F-S IQ	Met. Reading
Pintner-Cunningham (Grade 1)	.56	.46
Otis Quick-Scoring, Alpha (Grade 3)	.64	.52
Otis Quick-Scoring, Beta (Grade 6)	.64	.76
Cattell Culture-Fair, Scale 2 (Grade 8)	.72	.52
Pintner General Ability, Intermed. (Grade 8)	.80	.85
WISC Full Scale IQ		.76

N = 79

TABLE 9.4

Means, Standard Deviations, and Intercorrelations: IQ Measures and Reading

			Intercorrelations						
Test	Mean	S.D.	1	2	3	4	5	6	7
1. Otis Beta IQ	86.91	12.09	1.00	.49	.80	.69	.45	.66	.75
2. Cattell IQ	95.57	15.80		1.00	.69	.62	.63	.72	.56
3. Pintner IQ	90.28	15.82			1.00	.81	.55	.79	.81
4. WISC Verbal IQ	92.12	11.86				1.00	.53	.89	.78
5. WISC Perf. IQ	93.20	11.97					1.00	.86	.53
6. WISC Full Scale IQ	91.89	11.47						1.00	.76
7. Metro. Reading (Grade Equivalent)	5.0	1.80							1.00

N = 113

TABLE 9.5

Correlations of Intelligence Tests with Gain in Metropolitan Median Grade Score

Measure	r with Gain in Metropolitan Median Grade Score
1. WISC Verbal IQ (Seventh grade)	.48
2. WISC Perform. IQ (Seventh grade)	.34
3. WISC Full Scale IQ (Seventh grade)	.48
4. Pintner-Cunningham IQ (First grade)	.21
5. Otis Quick-Scoring, Alpha (Third grade)	.22
6. Otis Quick-Scoring, Beta (Sixth grade)	.24
7. Pintner General Ability (Eighth grade)	.42
8. Cattell Culture-Fair (Eighth grade)	.49

N's vary from 99 (Pintner-Cunningham) to 130

TABLE 9.6

Correlations of WISC Sub-tests with Three-year Gain in Median Achievement on Metropolitan Battery

WISC Sub-test	r with Gain in Median Achievement
Verbal	
1. Information	.44
2. Comprehension	.40
3. Arithmetic	.43
4. Similarities	.37
5. Vocabulary	.45
6. Digit span	.11
Performance	
7. Picture completion	.16
8. Picture arrangement	.17
9. Block design	.37
10. Object assembly	.27
11. Coding	.13

TABLE 9.7

Correlations of Initial Achievement with Three-year Gain in Median Achievement on Metropolitan Battery

Metropolitan, 9/61	r with Gain in Median Achievement
Word knowledge	.31
Reading	.33
Spelling	.18
Language	.30
Language study skills	.30
Arithmetic computation	.41
Arithmetic problem-solving	.47
Social studies information	.32
Social studies study skills	.30
Science	.25
Median Grade Score	.33

N = 130

TABLE 9.8

Multiple Correlations with Three-Year Gain in Achievement

Measures	Correlation
Total Population	
Best three WISC sub-tests	.56
Best three Metropolitan sub-tests (9/61)	.49
Boys	
Best three WISC sub-tests	.62
Best three Metropolitan sub-tests (9/61)	.56
Girls	
Best three WISC sub-tests	.59
Best three Metropolitan sub-tests (9/61)	.55

TABLE 9.9

Correlation of Initial Achievement with Three-Year Gain in Median Achievement on Metropolitan Battery

Metropolitan, Sept. 1961	$\underline{r}$ With Gain In Median Achievement
Word Knowledge	.31
Reading	.33
Spelling	.18
Language	.30
Language Study Skills	.30
Arithmetic Computation	.41
Arithmetic Problem-Solving	.47
Social Studies Information	.32
Social Studies Study Skills	.30
Science	.25
Median Grade Score	.33

N = 130

TABLE 9.10

Unrotated Factor Matrix of WISC Sub-tests for Total Original Population (N=196)

Sub-test	Factors I	 II	 III
1. Information	.776	- .290	- .052
2. Comprehension	.644	- .088	- .183
3. Arithmetic	.612	- .269	.190
4. Similarities	.665	- .287	- .053
5. Vocabulary	.793	- .161	- .116
6. Digit span	.346	- .121	.223
7. Picture completion	.429	.480	- .096
8. Picture arrangement	.474	.202	.009
9. Block design	.551	.392	.105
10. Object assembly	.466	.579	.004
11. Coding	.307	.063	.225
Cumulative Proportion of Total Variance	.737	.938	.980

TABLE 9.11

Oblique Rotated Factor Matrix of WISC Sub-tests for Total Original Population

Sub-test	Factors I	II	III	Commonality
1. Information	.474	.060	.029	.689
2. Comprehension	.448	.124	.121	.456
3. Arithmetic	.199	.137	.253	.483
4. Similarities	.428	.086	.016	.527
5. Vocabulary	.482	.080	.039	.668
6. Digit Span	.005	.074	.257	.184
7. Picture Completion	.064	.584	.073	.424
8. Picture Arrangement	.106	.311	.045	.266
9. Block Design	.017	.488	.141	.468
10. Object Assembly	.042	.664	.027	.552
11. Coding	.085	.089	.250	.149

Intercorrelations Among Factors

	I	II	III
I	1.000	.083	.770
II	.083	1.000	.229
III	.770	.229	1.000

TABLE 9.12

Intercorrelations Among Metropolitan Achievement Sub-tests, First Administration for Total Original Population

Sub-test	1	2	3	4	5	6	7	8	9	10
1. Word Knowledge		.84	.77	.70	.69	.66	.74	.72	.59	.81
2. Reading	.84		.65	.68	.72	.64	.74	.77	.61	.83
3. Spelling	.77	.65		.69	.57	.60	.62	.63	.46	.62
4. Language	.70	.68	.67		.66	.72	.73	.61	.53	.64
5. Language Study Skills	.69	.72	.57	.66		.65	.70	.67	.51	.68
6. Arithmetic Computation	.66	.64	.60	.72	.65		.85	.60	.50	.58
7. Arith. Problem-Solving and Concepts	.74	.74	.62	.73	.70	.85		.69	.62	.68
8. Social Studies Information	.72	.77	.63	.61	.67	.60	.69		.57	.76
9. Soc. Studies Study Skills	.59	.61	.46	.53	.51	.50	.62	.57		.59
10. Science	.81	.83	.62	.64	.68	.58	.68	.76	.59	

TABLE 9.13

Unrotated Factor Matrix of Metropolitan Sub-tests, First Administration, Original Population

Variable	A	B	C
1. Word Knowledge	.898	- .150	.154
2. Reading	.891	- .195	- .063
3. Spelling	.766	- .013	.299
4. Language	.806	.168	.102
5. Language Study Skills	.793	.019	- .066
6. Arithmetic Computation	.802	.385	- .018
7. Arithmetic Problem-Solving and Concept	.877	.265	- .120
8. Soc. Studies Information	.821	- .155	- .076
9. Soc. Studies Study Skills	.666	- .042	- .136
10. Science	.851	- .255	- .079
Cumulative Proportion for Total Variance	.916	.971	.995

TABLE 9.14

Oblique Rotated Factor Matrix of Metropolitan Sub-tests, First Administration

Sub-test	Factor A	Factor B	Factor C	Communality
1. Word Knowledge	.187	.063	.238	.853
2. Reading	.360	.054	.024	.836
3. Spelling	.034	.017	.362	.676
4. Language	.029	.244	.158	.688
5. Language Study Skills	.187	.139	.001	.634
6. Arithmetic Computation	.110	.481	.025	.792
7. Arithmetic Problem-Solving	.059	.400	.063	.854
8. Social Studies Information	.326	.022	.003	.703
9. Social Studies Study Skills	.252	.081	.077	.464
10. Science	.407	.114	.009	.796

Intercorrelations Among Factors

	A	B	C
A	1.000	.518	.588
B	.518	1.000	.289
C	.588	.289	1.000

TABLE 9.15

Intercorrelations Among WISC and Metropolitan Achievement Test Sub-tests, First Administration, for the Total Original Population

Metropolitan	Verbal Scale Sub-tests						Performance Scale Sub-tests				
Sub-tests	Inf.	Comp.	Ari.	Sim.	Voc.	Dg. Sp.	P.C.	P.A.	B.D.	O.A.	Cod.
Word Knowledge	.66	.40	.50	.46	.62	.30	.10	.25	.26	.13	.24
Reading	.68	.46	.54	.55	.64	.35	.16	.35	.30	.19	.26
Spelling	.50	.17	.40	.32	.42	.26	.01	.10	.14	-.02	.25
Language	.55	.32	.48	.44	.47	.32	.04	.26	.27	.09	.33
Lang. Study Skills	.62	.30	.48	.40	.53	.33	.02	.33	.23	.09	.29
Arith. Comput.	.61	.32	.66	.48	.48	.31	.07	.26	.28	.11	.35
Arith. Problems	.66	.43	.73	.53	.58	.37	.07	.30	.33	.12	.32
Soc. Stud. Inf.	.60	.38	.47	.49	.55	.26	.03	.32	.17	.03	.27
Soc. Study Skills	.53	.35	.47	.45	.49	.23	.13	.32	.32	.15	.27
Science	.63	.38	.47	.45	.61	.33	.15	.37	.31	.17	.22

TABLE 9.16

Unrotated Factor Matrix Combining WISC and Metropolitan Sub-tests

Variable	Factors I	II	III	IV
1. Information	.794	.093	.268	.018
2. Comprehension	.529	.306	.319	.034
3. Arithmetic	.678	.003	.163	- .347
4. Similarities	.629	.118	.347	- .038
5. Vocabulary	.736	.238	.253	.113
6. Digit Span	.386	- .003	- .014	- .085
7. Picture Completion	.199	- .612	- .123	.059
8. Picture Arrangement	.402	.356	- .076	.043
9. Block Design	.398	.522	- .201	- .096
10. Object Assembly	.232	.670	- .241	.012
11. Coding	.345	.074	- .214	- .163
12. Word Knowledge	.865	- .177	- .095	.220
13. Reading	.890	- .055	- .020	.205
14. Spelling	.698	- .345	- .222	.089
15. Language	.776	- .187	- .175	- .092
16. Lang. Study Skills	.778	- .164	- .093	.027
17. Arith. Computation	.797	- .150	- .097	- .361
18. Arith. Problem-Solving and Concepts	.885	- .128	- .009	- .281
19. Soc. Stud. Information	.800	- .198	.015	.186
20. Soc. St. Study Skills	.687	.023	- .018	.015
21. Science	.839	- .059	- .093	.276
Cumulative Proportion of Total Variance	.72	.85	.90	.94

TABLE 9.17

Oblique Rotation of Factor Matrix of

WISC and *Metropolitan* Sub-tests Combined

Sub-test	Factors I	II	III	IV	Commonality
1. Information	.005	.395	.075	.081	.711
2. Comprehension	.159	.461	.053	.015	.476
3. Arithmetic	.077	.259	.200	.433	.607
4. Similarities	.026	.454	.047	.114	.531
5. Vocabulary	.138	.409	.106	.031	.675
6. Digit Span	.007	.043	.022	.135	.156
7. Picture Completion	.614	.071	.040	.080	.433
8. Picture Arrangement	.639	.078	.052	.018	.296
9. Block Design	.550	.003	.072	.105	.481
10. Object Assembly	.714	.021	.047	.035	.561
11. Coding	.154	.133	.005	.199	.197
12. Word Knowledge	.074	.014	.474	.091	.837
13. Reading	.003	.093	.404	.081	.838
14. Spelling	.188	.202	.418	.029	.863
15. Language	.079	.102	.218	.206	.676
16. Lang. St. Skills	.083	.019	.284	.088	.642
17. Arith. Comp.	.101	.012	.046	.473	.797
18. Arith. Prob.	.110	.089	.005	.404	.879

(cont. next page)

TABLE 9.17
(continued)

Sub-test	Factors				Commonality
	I	II	III	IV	
19. Soc. Stud. Inf.	.145	.076	.397	.063	.714
20. Soc. Stud. St. Skills	.050	.088	.171	.074	.473
21. Science	.035	.014	.480	.158	.792

Intercorrelations Among Factors

	I	II	III	IV
I	1.000	.167	.031	.154
II	.167	1.000	.395	.017
III	.031	.395	1.000	.795
IV	.155	.017	.795	1.000

TABLE 9.18

Means and Standard Deviations of Teacher Ratings in 7th and 8th Grade

		Mean 7th Grade	Mean 8th Grade	S.D. 7th Grade	S.D. 8th Grade
School Achievement	1. School prog. & achieve.	2.9	2.4	1.1	0.9
	2. Reading comprehension	3.0	2.4	1.0	0.8
	3. Oral English	2.9	2.3	1.0	0.7
	4. Written English	2.8	2.2	1.1	0.8
	5. Reasoning & prob. solv.	2.9	2.4	1.0	0.8
	6. General information	2.9	2.3	1.0	0.8
	7. Able to sustain att'n.	3.0	2.6	1.1	0.8
Schol. Attitudes & Behav.	1. Interest in sch. work	3.0	2.8	1.1	0.9
	2. Scholastic ambition	2.9	2.6	1.1	0.9
	3. Class participation	2.9	2.7	1.0	0.8
	4. Completes assignments	2.9	2.7	1.1	0.9
	5. Persists by himself	3.0	2.7	1.1	0.9
	6. Reliability, honesty	3.0	2.8	1.0	0.8
	7. Able to form plans	2.8	2.5	1.1	0.8
Phys. Char.	1. Attractiveness	3.0	2.9	0.7	0.7
	2. General health	3.1	2.9	0.8	0.7
	3. Energy and vigor	3.0	2.9	0.6	0.4

(cont. next page)

TABLE 9.18
(continued)

		Mean 7th Grade	Mean 8th Grade	S.D. 7th Grade	S.D. 8th Grade
Social Behavior	1. Neatness, accepts routines	2.9	2.7	1.0	0.8
	2. Courtesy, manners	3.4	2.9	0.9	0.7
	3. Popular with classmates	3.0	2.6	0.7	0.6
	4. Absence of aggressivity	3.1	2.8	0.9	0.8
Temperament	1. Happiness in general	2.8	2.6	0.7	0.7
	2. Free from fear, anxiety	2.7	2.5	0.7	0.7
	3. Free from tension	2.6	2.4	0.8	0.8
	4. Evenness of mood	2.7	2.5	0.9	0.7
	5. Free from hostility	2.9	2.6	0.9	0.8

TABLE 9.19

Means and Standard Deviations for the Rosenzweig P-F Test, Compared with Published Norms* (N = 147) for Nearest Age Level (N = 77)

Test Factor	Group Mean Percent	Norm Mean Percent	Group Mean	Norm Mean	Group S.D.	Norm S.D.
E^*	49.9	40.5			15.0	13.8
I^*	22.7	29.5			7.8	6.3
M^{**}	27.3	30.4			10.6	11.3
O-D	15.8	16.0			6.3	5.9
E D	57.2	54.9			12.6	9.0
$N\text{-}P^{**}$	26.7	29.5			11.0	8.3
GCR	55.9	63.8			8.8	9.3
$\underline{E}$	6.6	7.5			4.7	4.7
$\underline{I}$	9.7	10.4			5.5	5.7
$\underline{E} + \underline{I}$	16.3	17.9			6.8	6.3
$\underline{E} - \underline{E}^*$	24.9	15.8			16.1	9.0
$I - \underline{I}^*$	6.6	10.4			4.8	6.0
$M + \underline{I}$	36.9	39.2			12.4	11.9
E'			1.2	1.2	1.0	1.1
E			7.6	5.5	3.8	2.5
e			3.2	2.9	1.8	1.6
I'			0.4	0.7	0.5	0.6
I			3.8	5.0	1.5	1.7
i			1.3	1.4	1.1	1.2
M'			2.3	2.0	1.2	1.4
M			2.4	2.4	1.4	1.6
m			1.9	2.8	1.2	1.4

*P .01

**P .05

TABLE 9.20

Quantitative Rorschach Findings in the Project Group (N = 65) Compared with Normative Findings[*]

	Project Mean	Group S.D.	AMW - Age 13 Mean	AMW - Age 13 S.D.	AMW - Age 14 Mean	AMW - Age 14 S.D.
Main Responses	14.1	5.8	20.1	11.2	23.4	13.7
Additional Resp.	1.6	2.1				
Total Time	460.5	183.2	774[**]		822[**]	
Time per Response	35.4	15.7				
Achromatic R T	17.2	12.9				
Chromatic R T	21.8	18.2				
F %	53.1	19.9	62.7	20.2	63.1	17.6
F + %	82.4	17.7	92.8	7.1	92.7	6.6
Extended F %	89.7	12.4				
Extended F + %	82.5	14.4				
FK + F + Fc %	56.0	19.9				
A + Ad %	49.8	20.8	46.8	12.7	46.2	13.0
H + A	7.4	4.0				
Hd + Ad	1.3	1.5				
Populars	3.6	1.5	6.6[#]	1.7	6.6[#]	1.9
Additional Populars	0.5	0.8				
Originals	0.8	1.1				
Additional Originals	0.3	0.5				

(cont. next page)

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[*] Ames, L.B., Metraux, R.W., and Walker, R.N., Adolescent Rorschach Responses, New York: Harper & Bros., 1959

[**] N = 77, age 13; N = 73, age 14. Time includes inquiry.

[#] Ames, et al had a list of 17 populars; Klopfer lists only ten.

TABLE 9.20
(continued)

	Project	Group	AMW - Age 13		AMW - Age 14	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
VIII - X %	34.5	10.6				
M	1.1	1.3	2.1	2.2	2.4	2.3
FM	2.4	1.8	2.0	1.9	2.3	1.9
m	0.5	0.8	1.0	1.1	0.8	1.0
k	0.3	0.7				
K	0.1	0.3				
FK	0.1	0.3				
F	7.4	4.0				
Fc	0.4	0.6	1.1[@]	1.4	1.2[@]	1.7
c	0.1	0.4				
C'	0.4	0.7				
FC	0.3	0.5	0.3	0.6	0.3	0.5
CF	0.8	1.0	0.7	0.9	0.8	1.2
C	0.1	0.5	0.1	0.4	0.2	0.4
W	6.3	3.3				
W %	47.5	19.6	46.2	25.6	42.6	26.3
D	6.8	4.7				
D %	46.6	18.2	45.9	18.8	47.3	20.4
d	0.3	0.9				
d %	1.7	4.7				
Dd + S	0.7	1.0				

(cont. next page)

[@] Scored as F (C) by Ames; includes Fc, c, C', k, and K in most cases.

TABLE 9.20
(continued)

	Project Mean	Group S.D.	AMW - Age 13 Mean	AMW - Age 13 S.D.	AMW - Age 14 Mean	AMW - Age 14 S.D.
Dd + S %	4.3	5.4				
H	1.4	1.5	3.7	not given	4.8	not given
Hd	0.4	0.8				
A	6.0	3.2	10.0		11.5	
Ad	0.8	1.2				
Aobj	0.4	0.6				
At	1.2	1.5	0.6		1.2	
Obj	1.0	1.5				
N	0.3	0.8	0.8		0.8	
Plant	0.5	1.1	0.5		0.5	
Geo	0.3	0.7	0.1		0.1	
X - ray	0.3	0.7				
Miscellaneous	1.4	1.8				

TABLE 9.21

Mean Achievement in Relation to Ego Strength, Residential Mobility and Various Attention Measures

		Attention Efficiency	Digit Span Efficiency	Coding	Freedom From Distractibility	Teacher Ratings Attention
Achievement	Males N = 31	.369	.409	.528**	.634*	.855*
	Females N = 35	.513**	.448	.504**	.636*	.796*

*P < .01
**P < .05

TABLE 9.22

Correlation Between 7th and 8th Grade Teacher Ratings and Final Achievement Gain

		7th Grade	8th Grade
School Achievement	1. School prog. & achieve.	.49*	.51*
	2. Reading comprehension	.42*	.45*
	3. Oral English	.39*	.40*
	4. Written English	.42*	.48*
	5. Reasoning & prob. solv.	.46*	.46*
	6. General information	.45*	.40*
	7. Able to sustain att'n.	.46*	.52*
Schol. Attitudes & Behav.	1. Interest in school work	.44*	.51*
	2. Scholastic ambition	.48*	.50*
	3. Class participation	.45*	.50*
	4. Completes assignments	.44*	.54*
	5. Persists by himself	.49*	.51*
	6. Reliability, honesty	.42*	.57*
	7. Able to form plans	.41*	.46*
Phys. Char.	1. Attractiveness of build	.23**	.26**
	2. General health	.27**	.37*
	3. Energy and vigor	.05	.25**
	N =	76	69

(cont. next page)

*$p < .01$
**$p < .05$

TABLE 9.22
(continued)

		7th Grade	8th Grade
Social Behav.	1. Neatness, accepts routines	.53*	.42*
	2. Courtesy, manners	.39*	.37*
	3. Popular with classmates	.42*	.27**
	4. Absence of aggressivity	.31*	.39*
Temperament	1. Happiness in general	.32*	.32*
	2. Free from fear, anxiety	.30*	.27**
	3. Freedom from tension	.38*	.34*
	4. Evenness of mood	.34*	.29**
	5. Freedom from hostility	.31*	.30**
	N =	76	69

$^{*}p < .01$
$^{**}p < .05$

APPENDIX D

INSTRUMENTS AND EXTENDED TEST DATA RELATED TO CHAPTER 10

PERSONAL BACKGROUND DATA QUESTIONNAIRE

Adolescent Psychology BRIDGE Field-Experience Study
Department of Education, Queens College

1. Name ______________________________ Date ____________

2. (Encircle one) 18 and under 19 thru 20 21 thru 25 26 and over

3. Address ______________________________

4. Marital Status: (Encircle one) Single Married Divorced

5. Residential Status: (Encircle one) Own apt. Live with parents

6. Parents' Schooling: (Encircle highest level for each parent)

(a) Father:	Elem. School	H. S.	College	Univ. or Prof. Degree
(b) Mother:	Elem. School	H. S.	College	Univ. or Prof. Degree

7. Parents' occupation: (encircle for each parent)

(a) Father:		Unskilled W.	Semi-skilled W.	Bus. Mgr.	Prof.	Tchr.
(b) Mother:	Hswfe.	Unskilled W.	Semi-skilled W.	Bus. Mgr.	Prof.	Tchr.

8. Parents' Residence: (Encircle one)

(a) Apartment Rental:	Under 100	100-199	200-299	Over 300
(b) House App. Value:	Under 15,000	15,000-25,000	25,000-45,000	Over 45,000

9. (a) Was the teaching profession your first choice: Yes No
   (b) If no, state the first choice ______________________________

10. Who influenced you most in choosing teaching? ____________________

11. State briefly your two most important reasons for choosing teaching.

a. ______________________________

____

____

b. ______________________________

____

____

12. In which type of school would you prefer to teach? (Encircle One)

Parochial Private Public Any of these three

13. Where would you prefer to teach? Rank the choices below from "1" (most preferred) to "6" (least preferred)

( ) N. Y. C. ( ) Nassau ( ) Suffolk ( ) Westchester
( ) N. Y. S. ( ) Out of N. Y. State

14. What type of youngster would you prefer to teach? Rank these 1, 2, 3, 4

( ) Normal ( ) Delinquent
( ) Emotionally disturbed ( ) Physically handicapped

15. Which kinds of youngsters would you prefer to teach? Rank 1-4

( ) Negro ( ) Puerto Rican ( ) White ( ) Mixed group

16. What intellectual level youngster would you prefer teaching? Rank 1-6

( ) Extremely bright ( ) Bright ( ) Average
( ) Retarded ( ) Mixture

17. What socio-economic level youngster would you prefer teaching? Rank 1-4

( ) Upper class ( ) Middle class ( ) Lower class
( ) Mixed group

18. What religious group of youngsters would you prefer teaching? Rank 1-4

( ) Catholic ( ) Jewish ( ) Protestant ( ) Mixed Group

19. In what type of neighborhood would you prefer to teach? Rank 1-4

( ) Lower class slum ( ) Middle class ( ) Upper class suburb
( ) Any type of neighborhood

20. What type of school would you prefer to teach? Rank 1-2

( ) Traditional ( ) Progressive
a. How do you define "traditional"? ______________________
____
b. How do you define "progressive"? ______________________
____

IN ITEMS 12 THROUGH 20, PLACE AN X IN THE PARENTHESIS IF YOU WOULD REJECT ANY TEACHING ASSIGNMENT IN THIS CHOICE OF SCHOOL OR YOUNGSTER.

21. Use the following space or back of this sheet if there are any comments you want to make concerning this questionnaire or your answers, or if you wish to clarify any answers you have given.

A SURVEY OF SOCIAL CLASS UNDERSTANDINGS

Adolescent Psychology BRIDGE Field-Experience Study
Department of Education, Queens College

Name ______________________ **Date** ______________

Below is a list of statements about people in "lower class (from a socio-economic point of view) culture." Answer each question. Blacken the space under U if you are undecided about its truth or falsity. If you know that the statement is false then blacken the space under F. If you have no knowledge about the statement or have never heard about it, then blacken the space under N.

K = Know F = False U = Undecided N = Never heard of it

K	U	F	N		
○	○	○	○	1.	The underprivileged youngster's IQ score is more a reflection of his experiences than of his inherent intellectual abilities.
○	○	○	○	2.	The dark-skinned Puerto-Rican youngster is more likely to learn English effectively than the Negro youngster.
○	○	○	○	3.	Generally, culturally disadvantaged youngsters have less need of clear routines and expectations than middle-class children.
○	○	○	○	4.	Lower-class Negro boys have a greater lag in language development than girls because they have fewer models of adequate adults with whom to identify.
○	○	○	○	5.	The lower-class youngster who has had much failure in school usually is unrealistic in his vocational aims.
○	○	○	○	6.	In a school population of mixed social-class membership, lower-class youngsters in the first grade will act more like their middle-class peers than they will in later grades.
○	○	○	○	7.	The underprivileged youngster who is a slow learner cannot be expected to reach a high level of subject-matter mastery.
○	○	○	○	8.	Reading and intellectual concerns are generally viewed by lower class men as unmasculine.
○	○	○	○	9.	A dominant approach of the culturally disadvantaged person is "to get by" rather than "to get ahead."
○	○	○	○	10.	Most youth and adults identify themselves with the middle class.
○	○	○	○	11.	Lower-class people are more aggressive than middle-class people.
○	○	○	○	12.	Underprivileged children are capable of utilizing language in a rich and free fashion.

K U F N

○ ○ ○ ○ 13. The deprived child wants and needs respect from the teacher rather than "love."

○ ○ ○ ○ 14. Among the underprivileged, physical punishment is apparently not very effective in curbing aggression.

○ ○ ○ ○ 15. Generally the lower-class child is interested in education.

○ ○ ○ ○ 16. A significant number of culturally disadvantaged children have antagonistic attitudes towards "school."

○ ○ ○ ○ 17. Frequently, parents of culturally disadvantaged children have little education and cannot read English.

○ ○ ○ ○ 18. In comparison with higher socio-economic status groups, lower class families are less interested in college for their children.

○ ○ ○ ○ 19. The underprivileged person is more inclined towards vocational than academic aspects of education.

○ ○ ○ ○ 20. Underprivileged people are more sexually "loose" than privileged people.

○ ○ ○ ○ 21. New cars, gadgets, and sports are exciting--diversions for lower class people.

○ ○ ○ ○ 22. Indirectly, segregation of education in northern schools leads to discrimination against lower-class children.

○ ○ ○ ○ 23. Middle class teachers in schools attended by underprivileged children often unconsciously discriminate against these children.

○ ○ ○ ○ 24. The culturally disadvantaged individual tends to learn more from physical and motoric activities than from abstract ideas.

○ ○ ○ ○ 25. The underprivileged child is more typically visual than aural in his learning abilities.

○ ○ ○ ○ 26. Class lines are more definitely enforced than before at adolescence, and more so in the case of girls than boys.

○ ○ ○ ○ 27. In America class differences are to be found essentially among the whites; such differences are negligible among Negroes.

○ ○ ○ ○ 28. The most important criterion for estimating social class is income.

○ ○ ○ ○ 29. The guiding values of school and society are highly related to middle class beliefs.

○ ○ ○ ○ 30. It is quite common to find "upper class" youth in the public schools.

SELF-AWARENESS ATTITUDE INVENTORY

Adolescent Psychology BRIDGE Field-Experience Study
Department of Education, Queens College

Name ______________________________ Date ______________

DIRECTIONS: There are no right or wrong answers to the following questions. Please do not try to answer these questions as you think they "should be" answered, but rather as you really feel. Answer each question quickly and honestly, using the following code:

Y = Yes **N** = No **U** = Uncertain

Y	U	N		
○	○	○	1.	I'd like to be friendly with some Puerto-Rican families.
○	○	○	2.	People should be realistic enough to accept the fact that people like to associate with others like themselves.
○	○	○	3.	I'd like to discover how I'd feel associating with Negro and Puerto Rican adolescents.
○	○	○	4.	I am especially attracted to Negro adolescents.
○	○	○	5.	I am afraid to walk in an all Puerto-Rican neighborhood.
○	○	○	6.	I am aware of being prejudiced against Negroes and Puerto Ricans.
○	○	○	7.	I fear the lower-class adolescents because they become violent so suddenly.
○	○	○	8.	Frankly, I prefer to avoid contact with people in the lower classes.
○	○	○	9.	I am most attracted to well-behaved adolescents.
○	○	○	10.	I hope to be teaching some day in a neighborhood where there are mostly bright children.
○	○	○	11.	I have usually felt uncomfortable being in contact with lower-class colored adolescents.
○	○	○	12.	Deep down I have a dislike for Puerto-Rican adolescents.
○	○	○	13.	Deep down I have a dislike for Negro adolescents.
○	○	○	14.	I'd rather avoid trouble and stay away from lower-class neighborhoods.
○	○	○	15.	I feel Negroes have a distinctive smell.
○	○	○	16.	I feel uncomfortable when I must listen to people with strange accents.

Y **U** **N**

○ ○ ○ **17. I'd go out of my way to make contact with adolescents from low-income homes.**

○ ○ ○ **18. I enjoy having Negro friends.**

○ ○ ○ **19. I'd prefer teaching in a neighborhood where children are underprivileged.**

○ ○ ○ **20. Rock and roll is a highly mediocre type of dancing.**

○ ○ ○ **21. Rock and roll dancing lacks rhythm and grace.**

○ ○ ○ **22. Adolescent hairdos show poor taste.**

○ ○ ○ **23. Tapered pants on male adolescents should be regulated by the school.**

○ ○ ○ **24. Tight skirts and tight sweaters on adolescent girls should be regulated by the school.**

○ ○ ○ **25. I can't stand adolescents who remind me of my own adolescence.**

○ ○ ○ **26. Eventually, I'd like to teach in an upper middle-class neighborhood.**

PROFESSIONAL EXPERIENCES CHECKLIST

Adolescent Psychology BRIDGE Field-Experience Study
Department of Education, Queens College

Name ______________________________ Date ______________

Below is a list of general statements, about experiences in relating to adolescents. Blacken the space under D if you have ever "done it," or place an X in the space if you have no experience in this activity. Also, blacken the space under VC if you are very confident about the ability; blacken the space under FC if fairly confident; under SI if somewhat insecure, and under VI if you feel very insecure. For items 19 and 20, add to the list if an experience you have had is not listed, and fill out the scale.

D	VC	FC	SI	VI		
○	○	○	○	○	1.	to be comfortable with adolescents.
○	○	○	○	○	2.	to talk the "special language" of adolescents.
○	○	○	○	○	3.	to reach adolescents verbally.
○	○	○	○	○	4.	to reach adolescents non-verbally.
○	○	○	○	○	5.	to lead a (club) group of adolescents.
○	○	○	○	○	6.	to set discipline limits on adolescent group members.
○	○	○	○	○	7.	to observe what is significant about adolescent behavior.
○	○	○	○	○	8.	to show "warmth" to adolescents.
○	○	○	○	○	9.	to gain and to hold the respect of adolescents.
○	○	○	○	○	10.	to show anger and yet be objective with adolescents.
○	○	○	○	○	11.	to be friendly yet maintain necessary "distance."
○	○	○	○	○	12.	to tolerate behavior in conflict with your own values.
○	○	○	○	○	13.	to reconcile verbally aggressive adolescent behavior.
○	○	○	○	○	14.	to reconcile open expression of sex desires of adolescents.
○	○	○	○	○	15.	to plan trips, parties, interesting games, etc.
○	○	○	○	○	16.	to participate in games, trips, dances with adolescents.
○	○	○	○	○	17.	to lead mass group activities involving adolescents.
○	○	○	○	○	18.	to help an adolescent with his school work.
○	○	○	○	○	19.	______________________________
○	○	○	○	○	20.	______________________________

In the list below, encircle the Y for yes if you had contacts with the following aspects of the adolescent life that you have observed. Circle the N if no contact.

Y N 21. Fads
Y N 22. Heroes
Y N 23. Favorite records
Y N 24. TV programs
Y N 25. Disorderly behavior
Y N 26. Aggressive behavior
Y N 27. Sexual behavior
Y N 28. Social life (dating)
Y N 29. Parent interaction
Y N 30. Sibling interaction

Y N 31. Home life
Y N 32. School work
Y N 33. Reading interests
Y N 34. Idealism
Y N 35. Dependency feelings
Y N 36. Sexual confusion
Y N 37. Religious interests
Y N 38. Personality problems
Y N 39. Future plans
Y N 40. Personal habits

QUEENS COLLEGE ADJUSTMENT QUESTIONNAIRE

Adolescent Psychology BRIDGE Field-Experience Study
Department of Education, Queens College

Name ______________________________ Date ______________

Most students have personal problems. We are interested in finding out what kinds of problems are common to our students. Please encircle one of the letters beside each question in accordance with the following scale.

a... means "no", "never", "not at all", etc.
b... means "somewhat", "sometimes", "a little", etc.
c... means "about as often as not", "an average amount", etc.
d... means "usually", "a good deal", "rather often", etc.
e... means "practically always", "entirely", etc.

a b c d e 1. Do you find it hard to get down to studying?
a b c d e 2. Does your mind wander while reading a textbook?
a b c d e 3. Do you go to pieces when taking an examination ?
a b c d e 4. Is your rate of reading too slow?
a b c d e 5. Do you turn written reports in late?
a b c d e 6. Do you get stage fright?
a b c d e 7. Do you worry over humiliating experiences?
a b c d e 8. Are you afraid of falling when you are on a high place?
a b c d e 9. Are your feelings easily hurt?
a b c d e 10. Do you keep in the background on social occasions?
a b c d e 11. Are you happy and sad by turns without knowing why?
a b c d e 12. Are you shy?
a b c d e 13. Do you daydream frequently?
a b c d e 14. Do you get discouraged easily?
a b c d e 15. Do you say things on the spur of the moment and then regret them?
a b c d e 16. Do you like to be alone?
a b c d e 17. Do you cry easily?
a b c d e 18. Does it bother you to have people watch you work even when you do it well?
a b c d e 19. Does criticism hurt you badly?
a b c d e 20. Do you cross the street to avoid meeting someone?
a b c d e 21. At a reception or tea do you avoid meeting the important person?
a b c d e 22. Do you often feel just miserable?
a b c d e 23. Do you hesitate to volunteer in a class recitation?
a b c d e 24. Are you often lonely?
a b c d e 25. Are you self-conscious before superiors?
a b c d e 26. Do you lack self-confidence?
a b c d e 27. Are you self-conscious about your appearance?
a b c d e 28. If you see an accident does something keep you from giving help?
a b c d e 29. Do you feel inferior?
a b c d e 30. Is it hard for you to make up your mind until the time for action is past?

SELF-INVENTORY ON FIELD EXPERIENCE

Adolescent Psychology BRIDGE Field-Experience Study
Department of Education, Queens College

Name ______________________________ Date ____________________

Please complete the following sentences as fully as possible.

1. I look back at my field experience with feelings of

2. I look upon myself in relation to adolescents as

3. In working with adolescents, my greatest assets were

4. In working with adolescents, my greatest liabilities were

5. For me, teaching as a career is

6. From the field experience I got

EXAMPLES OF SENTENCE COMPLETION REACTIONS ON SELF-INVENTORY ON FIELD EXPERIENCE

1.	**Security--Positive:**	excitement and enjoyment[*]
		eagerness to learn
		accomplishment
		that I can do job
	Insecurity--Negative:	anxiety
		fear and apprehension
		(non-interest and very little learning
		(distaste; not fully prepared
	Ambivalent:	mixed emotions: fear and excitement
		interest but apprehensive
		sorrow for first semester; joy for second
		learned, but could have learned more
2.	**Dominance--Leadership:**	more mature, older and wiser; able to guide them
		able to help them grow up
		an able leader
		an older person that can be friendly but helpful
	Peer Related--Competitive:	not being much above them
		equal with them
		an older friend, but no curb on their actions
		a friend, too inexperienced to cope with them
	Dual:	able to be friendly, but to keep distance
		one of gang but with authority
		both a peer and superior
		still struggling with them; sometimes a bit of a guide
3.	**Personal:**	sense of humor
		creativity
		even temper
		lively curiosity
	Empathic:	ability to accept people as they are
		empathy and sympathy
		ability to listen to them
		understanding some of their problems
	Personal--Empathic:	desire to learn to help them
		interest in them
		my knowledge of human character; enjoyment of physical activities
		ability to get along with others; cheerful

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[*] The first two examples in each category are pre-test reactions, the second two examples are post-test reactions.

4. Personal:
shyness
perfectionism
fear; lack of confidence
acted too much like one of the kids

Empathic:
haven't leadership qualities
not acquainted with adolescents
inability in communicating with
ambivalent attitude toward them

Personal-Empathic:
resentment of them because they resent me
indecision in discipline
not creative enough; took too long to get friendly
age; lack of recent contact

5. Self:
challenge
way to keep up on ideas
promising
stimulating and satisfying

Nurturant:
way to make them understand themselves
wonderful opportunity to help
maintain close contact with people
most rewarding if I can help children

Dual-Ambivalent:
rewarding and frustrating
a wonderful profession; many years to spread knowledge
financial security; opportunity to deal with people
exciting; afraid it will become routine

6. Personal:
learn about myself
self-rewarding experience
more insight into myself
pleasure in playing ping-pong

Empathic:
learn about all kinds of people
to adjust myself to adolescents
how to plan programs; leadership role
comfortable feeling in being with kids

Positive:
how to teach
to learn useful techniques
some idea of what my pupils will be like
a better understanding of agency

Dual-Ambivalent:
it to be fascinating or waste of time
some success and some failure
boost of ego; established meaningful contact second term
more understanding but a little bored

CONFIDENTIAL RATING QUESTIONNAIRE FOR STUDENT TEACHER

Name of Student ______________________ Date ______________

Name of Rater ______________________ School ______________

Position ____

____

Please use standards applicable to student teachers rather than to experienced teachers. The rater is invited to make use of the space provided beside each numerical rating for additional comments, illustrations or qualifications. If you wish to give other information, please use reverse side. If a particular item does not apply to your situation, omit it.

Rating key:

1. Completely unsatisfactory
2. Generally unsatisfactory
3. Generally satisfactory
4. Above average
5. Outstanding

I. Teaching Effectiveness

1. Knowledge of subject matter and materials ______
2. Creativity ______
3. Rapport with pupils ______
4. Skill in planning ______
5. Skill in following through on plans ______
6. Ability to conduct group work ______
7. Ability to lead a discussion ______
8. Ability to provide for individual differences ______
9. Ability to analyze classroom situations and adapt to them ______

II. Personal Characteristics

1. Attitude toward teaching as a profession ______
2. Maturity ______
3. Responsibility ______
4. Relationship with school staff ______
5. Ability to communicate effectively ______
6. Initiative ______
7. General appearance and manner ______

III. General

1. Extent of growth during the semester ______
2. Overall evaluation ______

Comments:

FIELD PLACEMENT QUESTIONNAIRE

Student's Name ______________________________ **Date** ______________

It is requested that all Ed. 13 and Ed. 14 students complete this form to help in refining and expediting our assignment procedures. Students are urged to be as specific as possible in answer to questions. Where specific choices are presented, please encircle your answer.

1. I am assigned to ______________________________
(Agency)

2. (a) I was assigned to work with a ______________________________
______________________________ **group.**
(briefly describe program)

(b) My leadership role with the group was as: (encircle one)

sole leader co-leader assistant to leader

3. My group's characteristics include: (encircle one for each category)

Average size: 2-4 5-12 12-20 over 20

4. Membership: Male Female Coed

5. Age Range: 8-9 9-11 11-13 13-15 18 and over

6. Attendance by members of the group was:

consistent erratic dwindling

7. The income level of the community is:

low middle high

8. Housing in the immediate community is mainly:

private homes tenements co-op apartments city housing

9. The young people who come to the community center or club are primarily: (encircle where appropriate)

a) Catholic Protestant Jewish
b) All-white inter-racial Spanish-speaking all negro

10. I have lived in a community similar to this: (encircle one)

Yes No

11. In any given period I've had conferences with my supervisor at least:

once a week every two weeks once a month less than once a month

12. These conferences were:

on an individual basis   on a group basis   both

13. The conference sessions lasted for:

30 minutes or more   20 minutes   10 minutes

14. My supervisor's help outside the scheduled conference hours was:

normally available   rarely available   not available

15. My conferences with my supervisor were focused on: (encircle one or more)

a. Understanding adolescent behavior
b. Understanding my role in the agency
c. Specific skills in leadership techniques
d. Planning specific programs for the groups
e. Orientation to the community
f. Getting specific suggestions to carry out in the group
g. Agency policies, rules, routines
h. Answering questions I raised
i. (Any other topic?) ______________________________

16. In my supervisory conferences:

a. Supervisor did most of the talking.
b. I did most of the talking.
c. The time was balanced.

17. Introduction to the agency's work involved:

no orientation sessions   one orientation session   more than one session

18. The nature of my assignment and responsibilities was clear to me by the end of:

first week   first month   six weeks   two months   never

19. The agency was organized and ready for the college student helpers:

Yes   No

20. There were sufficient regular staff personnel for the Youth membership

Yes   No

21. With respect to college students assigned to the agency, there were

too many   too few   enough

22. My field work assignment: (circle wherever appropriate)

a. gave me material for course assignments
b. added to my understanding of adolescents
c. added to my understanding of myself as a leader
d. had little to do with course material
e. was frustrating
f. was a waste of time

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23. (a) Did you continue with the same agency for the full Ed. 13 semester?

Yes No

(b) If no, how many agencies have you been assigned to?

2 3 4

(c) If you are in Ed. 14, was your field-work assignment the same as in Ed. 13?

Yes No

(d) If no, how many agencies have you been assigned to since the beginning of Ed. 13?

2 3 4

24. What was the biggest problem or disappointment for you in your placement?

25. What was the most satisfying aspect of your agency placement?

Table 10.1

Differences Between the BRIDGE and NON-BRIDGE Groups in the Sampling Criteria of Sex, Age, Marital Status, Parents' Residential Status, Parents' Schooling, Parents' Occupation, and Parents' Residence*

Variables	Bridge (N = 40)		Non-Bridge (N = 64)		df	X^2	Sig. Level
Sex							
Males	(12)	5	(18)	12			
Females	(88)	35	(82)	52	1	0.69	> .10
Ages							
18		4		3			
19-20		31		51			
21-25		2		5			
26+		3		5	3	1.33	> .10
Marital Status							
Single	(88)	35	(85)	54			
Married	(12)	5	(15)	10			
Divorced	(0)	0	(0)	0	1	0.17	> .10
Residential Status							
Own Apartment	(12)	5	(15)	10			
Live with Parents	(88)	35	(85)	54	1	0.17	> .10
Parents' Schooling							
Father							
Elementary School	(12)	5	(12)	8			
High School	(35)	14	(44)	28			
College	(35)	14	(22)	14			
Univ. or Prof.	(18)	5	(12)	8	3	2.29	> .10

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*Numbers in parentheses represent percentages

Variables	Bridge (N = 40)		Non-Bridge (N = 64)		df	X^2	Sig. Level
Parents' Schooling (continued)							
Mother							
Elem. School	(12)	5	(15)	10			
High School	(60)	24	(66)	42			
College	(20)	8	(15)	10			
Univ. or Prof.	(8)	3	(3)	2	2	1.14	>.10
Parents' Occupation							
Father							
Unskilled	(0)	0	(0)	0			
Semi-skilled	(20)	9	(28)	18			
Bus. & Mgr.	(52)	22	(43)	28			
Prof.	(20)	8	(18)	12			
Teacher	(0)	0	(6)	4	2	1.21	>.10
Mother							
Unskilled	(2)	1	(7)	4			
Semi-skilled	(15)	6	(13)	8			
Bus. & Mgr.	(18)	7	(17)	11			
Prof.	(2)	1	(0)	0			
Teacher	(12)	5	(7)	4			
Housewife	(48)	19	(52)	33	3	1.23	>.10
Parents' Residence							
Apt. Rental	(N = 13)		(N = 20)				
Under 100	(12)	5	(9)	6			
100-199	(18)	7	(18)	12			
200-299	(2)	1	(3)	2			
Over 300	(0)	0	(0)	0	1	0.23	>.10

Variables	Bridge (N = 13)		Non-Bridge (N = 20)		df	X^2	Sig. Level
House Value							
Under 15,000	(5)	2	(3)	2			
15,000-25,000	(35)	14	(50)	30			
25,000-45,000	(20)	8	(7)	4			
Over 45,000	(0)	0	(7)	4	1	1.42	$>.10$

Table 10.2

Differences Between the BRIDGE and NON-BRIDGE LOWER Groups on the Sampling Criteria of Sex, Age, Marital Status, and Fathers' Occupation

Variables	Bridge (N = 40)	Non-Bridge L (N = 24)	df	X^2	Sig. Level
Sex					
Boys	5	4			
Girls	35	20	1	0.15	> .10
Age					
18	4	1			
19-20	31	19			
21-25	2	3			
26	3	1	1	0.15	> .10
Marital Status					
Single	35	22			
Married	5	2			
Divorced	0	0	1	0.26	> .10
Father's Occupation					
Unskilled	0	0			
Semi-skilled	9	6			
Bus. Mgr.	23	10			
Prof.	8	6			
Teacher	0	2	2	1.84	> .10

Table 10.3

Mean Differences Between the BRIDGE and NON-BRIDGE Groups on the Sampling Criteria of Scholastic Aptitude Test Scores (SAT) and College Academic Index

	BRIDGE (N = 40)		NON-BRIDGE (N = 64)			
Variables	Mean	SD	Mean	SD	t	Sig. Level
SAT (Math)	497.66	61.15	547.66	71.32	3.65	<.01
SAT (Verbal)	509.06	70.01	535.20	75.20	1.75	.10
College Academic Index	2.65	0.45	2.55	0.36	1.01	>.10

Table 10.4

Mean Differences Between the BRIDGE and the NON-BRIDGE LOWER Groups on the Sampling Criteria of Scholastic Aptitude Test Scores (SAT) and College Academic Index

	BRIDGE (N = 40)		NON-BRIDGE L (N = 24)			
Variables	Mean	SD	Mean	SD	t	Sig. Level
SAT (Math)	497.66	61.15	542.62	59.35	2.87	< .01
SAT (Verbal)	509.06	70.01	514.06	62.10	0.29	>.10
College Academic Index	2.63	0.43	2.48	0.40	1.39	>.10

Table 10. 5

Pre-Test Percentage Differences Between the BRIDGE and NON-BRIDGE Groups on Personal Background Data Questionnaire Items Related to Teaching Choices

Item No.	Teaching Choices	Bridge (N = 40)	Non-Bridge (N = 64)	t	Sig. Level
9	Teaching as First Choice	78%	75%	0.35	>.10
10	Self-Experience as Main Factor in Choice of Teaching	20%	28%	0.92	>.10
11	Public Schools as First Choice	82%	53%	2.97	<.01
13	New York City as First Choice	58%	31%	2.71	<.01
	New York City as Second Choice	10%	16%	0.86	>.10
14	Non-Normal Youngsters as First Choice	5%	5%	0.00	>.10
15	Negro Youngsters as First or Second Choice	3%	9%	1.19	>.10
	Puerto Rican Youngsters as First or Second Choice	8%	3%	1.14	>.10
16	Retarded Youngsters as First or Second Choice	0	5%	1.43	>.10
	Intellectual Mixture as First or Second Choice	25%	20%	0.60	>.10
17	Lower Class Youngsters as First or Second Choice	22%	13%	1.20	>.10
	Mixed Youngsters as First Choice	50%	50%	0.00	>.10
19	Lower Class Slums as First or Second Choice	25%	8%	2.39	.05
	Any Setting as First Choice	18%	22%	0.49	>.10
20	Progressive Situation as First Choice	68%	62%	0.62	>.10

Table 10.6

Pre-Test Percentage Differences Between the BRIDGE and NON-BRIDGE LOWER Groups on Personal Background Data Questionnaire Items Related to Teaching Choices

Item No.	Teaching Choices	Bridge (N = 40)	Non-Bridge L (N = 24)	t	Sig. Level
9	Teaching as First Choice	78%	71%	0.63	>.10
10	Self-Experience as Main Factor in Choice of Teaching	20%	33%	1.16	>.10
11	Public Schools as First Choice	82%	83%	0.10	>.10
13	New York City as First Choice	58%	45%	1.07	>.10
	New York City as Second Choice	10%	13%	0.37	>.10
14	Non-Normal Youngsters as First Choice	5%	8%	0.49	>.10
15	Negro Youngsters as First or Second Choice	3%	12%	0.72	>.10
	Puerto Rican Youngsters as First or Second Choice	8%	4%	0.63	>.10
16	Retarded Youngsters as First or Second Choice	0	8%	1.81	.10
	Intellectual Mixture as First or Second Choice	25%	29%	0.35	>.10
17	Lower Class Youngsters as First or Second Choice	10%	17%		
	Mixed Youngsters as First Choice	50%	50%	0.00	>.10
19	Lower Class Slums as First or Second Choice	25%	8%	1.69	.10
	Any Setting as First Choice	18%	37%	1.69	.10
20	Progressive Situation as First Choice	68%	62%	0.42	>.10

Table 10. 7

Pre-Test Mean Differences Between the BRIDGE AND NON-BRIDGE Groups on the Survey of Social Class Understandings, Self-Awareness Attitude Inventory, Professional Skills Checklist, and Queens College (QC) Adjustment Questionnaire

Tests and Responses	Bridge (N = 40)		Non-Bridge (N = 64)			Sig.
	Mean	SD	Mean	SD	t	Level
Social Class Understandings	13.43	3.12	13.44	3.39	0.00	> .10
Self-Awareness Attitude Inventory	11.73	3.21	12.22	3.62	0.70	> .10
Professional Skills Checklist						
Feel Confident	10.79	3.82	10.19	3.87	0.77	> .10
Yes (Had Contact)	15.35	2.86	14.56	3.26	1.26	> .10
QC Adjustment Questionnaire	21.86	3.82	21.11	3.37	1.05	> .10

Table 10. 8

Pre-Test Mean Differences Between the BRIDGE and NON-BRIDGE LOWER Groups on the Survey of Social Class Understandings, Self-Awareness Attitude Inventory, Professional Skills Checklist, and Queens College (QC) Adjustment Questionnaire

Tests and Responses	Bridge (N = 40)		Non-Bridge L (N = 24)			Sig.
	Mean	SD	Mean	SD	t	Level
Social Class Understandings	13.43	3.12	12.66	2.99	1.26	> .10
Self-Awareness Attitude Inventory	11.73	3.21	12.33	3.40	0.90	> .10
Professional Skills Checklist						
Feel Confident						
Yes (Had Contact)	15.35	2.86	15.20	3.76	0.22	> .10
QC Adjustment Questionnaire	21.86	3.82	20.79	3.33	1.14	> .10

Table 10.9

Pre-Test Percentage Differences Between the BRIDGE Group and NON-BRIDGE Groups on Responses to the Self-Inventory on Field Experience

Categories of Responses	Bridge (N = 40)	Non-Bridge (N = 64)	t	Sig. Level
Security-Positive	36%	31%	0.73	> .10
Dominance-Leadership	48%	50%	0.18	> .10
Nurturance	23%	19%	0.49	> .10
Personal and Self	33%	32%	0.21	> .10

Table 10.10

Pre-Test Percentage Differences Between the BRIDGE and NON-BRIDGE LOWER Groups on Responses to the Self-Inventory on Field Experience

Categories of Responses	Bridge	Non-Bridge L (N = 24)	t	Sig. Level
Security-Positive	36%	31%	0.57	> .10
Dominance-Leadership	48%	46%	0.16	> .10
Nurturance	23%	21%	0.19	> .10
Personal and Self	33%	32%	0.17	> .10

Table 10.11

Pre-Test and Post-Test Percentage Differences for the BRIDGE Group on Personal Background Data Questionnaire Items Related to Teaching Choices

Item No.	Teaching Choices	Pre-test (N = 40)	Post-test (N = 40)	t	Sig. Level
9	Teaching as First Choice	78%	68%	1.16	>.10
10	Self-Experience as Main Factor in Choice of Teaching	20%	25%	0.64	>.10
11	Public Schools as First Choice	82%	80%	0.29	>.10
13	New York City as First Choice	58%	62%	0.41	>.10
	New York City as Second Choice	10%	15%	0.89	>.10
14	Non-Normal Youngsters as First Choice	5%	12%	1.15	>.10
15	Negro Youngsters as First or Second Choice	3%	5%	0.51	>.10
	Puerto Rican Youngsters as First or Second Choice	8%	5%	0.59	>.10
16	Retarded Youngsters as First or Second Choice	0%	5%	1.49	>.10
	Intellectual Mixture as First or Second Choice	25%	28%	0.35	>.10
17	Lower Class Youngsters as First or Second Choice	22%	28%	0.66	>.10
	Mixed Youngsters as First Choice	50%	52%	0.20	>.10
19	Lower Class Slums as First or Second Choice	25%	32%	0.75	>.10
	Any Setting as First Choice	18%	32%	1.49	>.10
20	Progressive Situation as First Choice	68%	75%	0.75	>.10

Table 10.12

Pre-Test and Post-Test Percentage Differences for the NON-BRIDGE Group on Personal Background Data Questionnaire Items Related to Teaching Choices

Item No.	Teaching Choices	Pre-test (N = 64)	Post-test (N = 64)	t	Sig. Level
9	Teaching as First Choice	75%	80%	0.69	> .10
10	Self-Experience as Main Factor in Choice of Teaching	28%	25%	0.39	> .10
11	Public Schools as First Choice	53%	61%	0.97	> .10
13	New York City as First Choice	31%	31%	0.00	> .10
	New York City as Second Choice	16%	7%	1.64	> .10
14	Non-Normal Youngsters as First Choice	5%	9%	0.91	> .10
15	Negro Youngsters as First or Second Choice	9%	14%	0.92	> .10
	Puerto Rican Youngsters as First or Second Choice	3%	3%	0.00	> .10
16	Retarded Youngsters as First or Second Choice	5%	6%	0.23	> .10
	Intellectual Mixture as First or Second Choice	20%	25%	0.71	> .10
17	Lower Class Youngsters as First or Second Choice	13%	14%	0.16	> .10
	Mixed Youngsters as First Choice	50%	56%	0.70	> .10
19	Lower Class Slums as First or Second Choice	8%	9%	0.22	> .10
	Any Setting as First Choice	22%	23%	0.17	> .10
20	Progressive Situation as First Choice	62%	68%	0.73	> .10

Table 10.13

Pre-Test and Post-Test Percentage Differences for the NON-BRIDGE LOWER Group on Personal Background Data Questionnaire Items Related to Teaching Choices

Item No.	Teaching Choices	Pre-test (N = 24)	Post-test (N = 24)	t	Sig. Level
9	Teaching as First Choice	71%	67%	0.39	> .10
10	Self-Experience as Main Factor in Choice of Teaching	33%	25%	0.64	> .10
11	Public Schools as First Choice	83%	71%		
13	New York City as First Choice	45%	41%	0.33	> .10
	New York City as Second Choice	13%	13%	0.00	> .10
14	Non-Normal Youngsters as First Choice	8%	8%	0.00	> .10
15	Negro Youngsters as First or Second Choice	12%	17%	0.58	> .10
	Puerto Rican Youngsters as First or Second Choice	4%	0%	1.03	> .10
16	Retarded Youngsters as First or Second Choice	8%	8%	0.00	> .10
	Intellectual Mixture as First or Second Choice	29%	33%	0.32	> .10
17	Lower Class Youngsters as First or Second Choice	17%	17%	0.00	> .10
	Mixed Youngsters as First Choice	50%	58%	0.61	> .10
19	Lower Class Slums as First or Second Choice	8%	8%	0.00	> .10
	Any Setting as First Choice	37%	25%	0.99	> .10
20	Progressive Situation as First Choice	62%	75%	1.00	> .10

Table 10.14

Post-Test Percentage Differences Between BRIDGE and NON-BRIDGE Groups on Personal Background Data Questionnaire Items Related to Teaching Choices

Item No.	Teaching Choices	Bridge (N = 40)	Non-Bridge (N = 64)	t	Sig. Level
9	Teaching as First Choice	68%	80%	1.38	> .10
10	Self-Experience as Main Factor in Choice of Teaching	25%	25%	0.00	> .10
11	Public Schools as First Choice	80%	61%	2.01	.05
13	New York City as First Choice	62%	31%	3.09	< .01
	New York City as Second Choice	15%	7%	1.31	> .10
14	Non-Normal Youngsters as First Choice	12%	9%	0.49	> .10
15	Negro Youngsters as First or Second Choice	5%	14%	1.45	> .10
	Puerto Rican Youngsters as First or Second Choice	5%	3%	0.52	> .10
16	Retarded Youngsters as First or Second Choice	5%	6%	0.22	> .10
	Intellectual Mixture as First or Second Choice	28%	25%	0.34	> .10
17	Lower Class Youngsters as First or Second Choice	28%	14%	1.75	.10
	Mixed Youngsters as First Choice	52%	56%	0.40	.10
19	Lower Class Slums as First or Second Choice	32%	9%	3.18	< .01
	Any Setting as First Choice	32%	23%	1.01	> .10
20	Progressive Situation as First Choice	75%	68%	0.76	> .10

Table 10.15

Post-Test Percentage Differences Between the BRIDGE and NON-BRIDGE LOWER Groups on Personal Background Data Questionnaire Items Related to Teaching Choices

Item No.	Teaching Choices	Bridge (N = 40)	Non-Bridge L (N = 24)	t	Sig. Level
9	Teaching as First Choice	68%	67%	0.08	> .10
10	Self-Experience as Main Factor in Choice of Teaching	25%	25%	0.00	> .10
11	Public Schools as First Choice	80%	71%	0.82	> .10
13	New York City as First Choice	62%	41%	1.63	> .10
	New York City as Second Choice	15%	13%	0.22	> .10
14	Non-Normal Youngsters as First Choice	12%	8%	0.50	> .10
15	Negro Youngsters as First or Second Choice	5%	17%	1.58	> .10
	Puerto Rican Youngsters as First or Second Choice	5%	0%	1.12	> .10
16	Retarded Youngsters as First or Second Choice	5%	8%	0.48	> .10
	Intellectual Mixture as First or Second Choice	28%	33%	0.42	> .10
17	Lower Class Youngsters as First or Second Choice	28%	17%	1.00	> .10
	Mixed Youngsters as First Choice	52%	58%	0.47	> .10
19	Lower Class Slums as First or Second Choice	32%	8%	2.20	.05
	Any Setting as First Choice	32%	25%	0.54	> .10
20	Progressive Situation as First Choice	75%	75%	0.00	> .10

Table 10.16

Pre-Test and Post-Test Mean Differences for the BRIDGE Group on the Survey of Social Class Understandings, Self-Awareness Attitude Inventory, Professional Skills Checklist, and Queens College (QC) Adjustment Questionnaire

Tests and Responses	Pre-test (N = 40) Mean	SD	Post-test (N = 40) Mean	SD	t	Sig. Level
Social Class Understandings	13.43	3.12	14.95	3.29	2.19	.05
Self-Awareness Attitude Inventory	11.73	3.21	13.68	3.84	2.59	.05
Professional Skills Checklist						
Feel Confident	10.79	3.82	11.85	3.89	1.31	> .10
Yes (Had Contact)	15.35	2.86	15.60	2.64	0.53	> .10
QC Adjustment Questionnaire	21.86	3.82	21.00	4.01	1.10	> .10

Table 10.17

Pre-Test and Post-Test Mean Differences for the NON-BRIDGE Group on the Survey of Social Class Understandings, Self-Awareness Attitude Inventory, Professional Skills Checklist, and Queens College (QC) Adjustment Questionnaire

Tests and Responses	Pre-test (N = 64) Mean	SD	Post-test (N = 64) Mean	SD	t	Sig. Level
Social Class Understandings	13.44	3.39	17.85	3.14	7.89	< .001
Self-Awareness Attitude Inventory	12.22	3.62	13.34	3.84	1.79	> .10
Professional Skills Checklist						
Feel Confident	10.19	3.87	10.96	3.72	1.20	> .10
Yes (Had Contact)	14.56	3.26	16.00	3.07	2.63	.05
QC Adjustment Questionnaire	21.11	3.37	20.94	3.65	0.29	> .10

Table 10.18

Pre-Test and Post-Test Mean Differences for the NON-BRIDGE LOWER Group on the Survey of Social Class Understandings, Self-Awareness Attitude Inventory, Professional Skills Checklist, and Queens College (QC) Adjustment Inventory

	Pre-test (N = 24)		Post-test (N = 24)			Sig.
Tests and Responses	Mean	SD	Mean	SD	t	Level
Social Class Understandings	13.66	2.99	17.51	3.16	5.59	< .001
Self-Awareness Attitude Inventory	12.33	3.40	13.58	3.51	1.29	> .10
Professional Skills Checklist						
Feel Confident	11.16	3.37	11.12	3.45	0.05	> .10
Yes (Had Contact)	15.20	3.76	15.58	3.50	0.37	> .10
QC Adjustment Questionnaire	20.79	3.33	20.83	3.48	0.05	> .10

Table 10.19

Post-Test Mean Differences Between the BRIDGE and NON-BRIDGE Groups on the Survey of Social Class Understandings, Self-Awareness Attitude Inventory, Professional Skills Checklist, and Queens College (QC) Adjustment Questionnaire

Tests and Responses	Bridge (N = 40) Mean	SD	Non-Bridge (N = 64) Mean	SD	t	Sig. Level
Social Class Understandings	14.95	3.29	17.85	3.14	4.50	< .001
Self-Awareness Attitude Inventory	13.68	3.84	13.34	3.83	0.44	> .10
Professional Skills Checklist						
Feel Confident	11.85	3.89	10.96	3.72	1.17	> .10
Yes (Had Contact)	15.60	2.64	16.00	3.07	0.68	> .10
QC Adjustment Questionnaire	21.00	4.01	20.94	3.65	0.08	> .10

Table 10.20

Post-Test Mean Differences Between the BRIDGE and NON-BRIDGE LOWER Groups on the Survey of Social Class Understandings, Self-Awareness Attitude Inventory, Professional Skills Checklist, and Queens College (QC) Adjustment Questionnaire

Tests and Responses	Bridge (N = 40) Mean	SD	Non-Bridge L (N = 24) Mean	SD	t	Sig. Level
Social Class Understandings	14.95	3.29	17.51	3.16	4.33	< .001
Self-Awareness Attitude Inventory	13.68	3.21	13.58	3.51	0.15	> .10
Professional Skills Checklist						
Feel Confident						
Yes (Had Contact)	15.60	2.64	15.58	3.50	0.03	> .10
QC Adjustment Questionnaire	21.00	4.01	20.83	3.48	0.17	> .10

Table 10. 21

Percentage Differences on Pre-Test and Post-Test Responses for the BRIDGE, NON-BRIDGE, and NON-BRIDGE LOWER Groups to the Self-Inventory o. Field Experience*

Groups and Responses	Pre-test	Post-test	t	Sig. Level
Bridge (N = 40)				
Security-Positive	36%	38%	0.30	> .10
Dominance-Leadership	48%	50%	0.19	> .10
Nurturance	23%	18%	0.56	> .10
Personal and Self	33%	38%	0.99	> .10
Non-Bridge (N = 64)				
Security-Positive	31%	31%	0.00	> .10
Dominance-Leadership	50%	44%	0.69	> .10
Nurturance	19%	11%	1.33	> .10
Personal and Self	32%	33%	0.26	> .10
Non-Bridge Lower (N = 24)				
Security-Positive	31%	35%	0.44	> .10
Dominance-Leadership	46%	38%	0.58	> .10
Nurturance	21%	8%	1.38	> .10
Personal and Self	32%	36%	0.64	> .10

*In all statistical analyses shown and related to responses to the Self-Inventory, the Security-Positive category includes responses to two sentences; the Dominance-Leadership category to one; Nurturance, to one; and Personal and Self, to four sentences. Total N in each comparison is figured by multiplying the total number of sentences in each category to the number of students in each sample group.

Table 10.22

Post-Test Percentage Differences Between the BRIDGE and NON-BRIDGE Groups on Responses to the Self-Inventory on Field Experience

Categories of Responses	Bridge (N = 40)	Non-Bridge (N = 64)	t	Sig. Level
Security-Positive	38%	31%	1.02	>.10
Dominance-Leadership	50%	44%	0.60	>.10
Nurturance	18%	11%	1.01	>.10
Personal and Self	38%	33%	1.05	>.10

Table 10.23

Post-Test Percentage Differences Between the BRIDGE and NON-BRIDGE LOWER Groups on Responses to the Self-Inventory on Field Experience

Categories of Responses	Bridge (N = 40)	Non-Bridge L (N = 24)	t	Sig. Level
Security-Positive	38%	35%	0.34	>.10
Dominance-Leadership	50%	38%	0.93	>.10
Nurturance	18%	8%	1.10	>.10
Personal and Self	38%	36%	0.33	>.10

Table 10. 24

Differences in Grades Between the BRIDGE and NON-BRIDGE Groups in Education Courses, Including Student Teaching*

Course and Grades	Bridge (N = 40)	Non-Bridge (N = 64)	df	X^2	Sig. Level
Education 13					
A	9	11			
B	23	35			
C	8	17			
D	0	1	2	1.04	> .10
Education 14					
A	11	8			
B	28	46			
C	1	10			
D	0	0	2	7.05	.05
Education 51					
A	7	12			
B	24	36			
C	8	6			
D	0	1	2	1.09	> .10
Education 61					
A	13	13			
B	17	28			
C	2	5			
D	1	0	2	1.08	> .10
Student Teaching					
A	13	14			
B	19	29			
C	1	3			
D	0	0	2	0.99	> .10

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*The respective Ns in the groups changed until there were finally thirty-three students who completed student teaching from the BRIDGE Group, forty-six from the NON-BRIDGE Group.

Table 10.25

Differences in Grades Between the BRIDGE and NON-BRIDGE Groups in Education Courses, Including Student Teaching*

Courses and Grades	Bridge (N = 40)	Non-Bridge L (N = 24)	df	X^2	Sig. Level
Education 13					
A	9	1			
B	23	14			
C	8	9			
D	0	0	2	5.01	> .10
Education 14					
A	11	2			
B	28	15			
C	1	7			
D	0	0	2	11.16	< .01
Education 51					
A	7	8			
B	24	11			
C	8	1			
D	0	0	2	4.72	> .10
Education 61					
A	13	6			
B	17	10			
C	2	2			
D	1	0	2	0.22	> .10
Student Teaching					
A	13	7			
B	19	11			
C	1	0			
D	0	0	1	0.01	> .10

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*The respective Ns in the groups change until there are finally thirty-three students who completed student teaching from the BRIDGE Group, eighteen from the NON-BRIDGE LOWER Group.

Table 10.26

Percentage Differences Between the BRIDGE and NON-BRIDGE Groups in A and B Grades Earned in Education 13 and Education 14

Courses	Bridge (N = 40)	Non-Bridge (N = 64)	t	Sig. Level
Education 13	80%	70%	1.12	> .10
Education 14	98%	85%	2.14	.05

Table 10.27

Percentage Differences Between the BRIDGE and NON-BRIDGE LOWER Groups in A and B Grades Earned in Education 13 and Education 14

Courses	Bridge (N = 40)	Non-Bridge L (N = 24)	t	Sig. Level
Education 13	80%	62%	1.57	> .10
Education 14	98%	71%	3.20	< .01

Table 10.28

Percentage Differences Between the BRIDGE and NON-BRIDGE Groups in Number of Students Who Have Completed Methods Courses and Student Teaching (By January, 1965)

Courses	Bridge (N = 40)	Non-Bridge (N = 64)	t	Sig. Level
Education 51	98%	86%	2.03	.05
Education 61	82%	71%	1.26	> .10
Student Teaching	82%	71%	1.26	> .10

Table 10.29

Percentage Differences Between the BRIDGE and NON-BRIDGE LOWER Groups in Number of Students Who Have Completed Methods Courses and Student Teaching (By January, 1965)

Courses	Bridge (N = 40)	Non-Bridge L (N = 64)	t	Sig. Level
Education 51	98%	83%	2.19	.05
Education 61	82%	75%	0.67	> .10
Student Teaching	82%	75%	0.67	> .10

Table 10.30

Differences Between BRIDGE and NON-BRIDGE Students in Confidential Ratings in Student Teaching

Categories and Ratings			Bridge (N = 33)	Non-Bridge (N = 46)	df	X^2	Sig. Level
I.	1.	One	0	0			
		Two	0	0			
		Three	8	6			
		Four	18	31			
		Five	7	9	2	2.17	> .10
	2.	One	0	0			
		Two	2	0			
		Three	11	21			
		Four	15	22			
		Five	5	3	2	1.54	> .10
	3.	One	0	0			
		Two	0	0			
		Three	7	7			
		Four	13	24			
		Five	13	15	2	0.96	> .10
	4.	One	0	0			
		Two	2	1			
		Three	8	5			
		Four	13	30			
		Five	10	9	2	5.12	> .10
	5.	One	0	0			
		Two	2	1			
		Three	10	13			
		Four	11	18			
		Five	10	14	2	0.26	> .10
	6.	One	0	0			
		Two	0	0			
		Three	8	15			
		Four	9	15			
		Five	6	5	2	1.29	> .10
	7.	One	0	0			
		Two	2	0			
		Three	13	17			
		Four	11	16			
		Five	5	10	2	0.79	> .10

Categories and Ratings			Bridge (N = 33)	Non-Bridge (N = 46)	df	X^2	Sig. Level
	8.	One	0	0			
		Two	0	0			
		Three	14	17			
		Four	9	16			
		Five	5	6	2	0.58	$>.10$
	9.	One	0	0			
		Two	3	0			
		Three	9	18			
		Four	14	21			
		Five	7	7	2	0.43	$>.10$
II.	1.	One	0	0			
		Two	0	0			
		Three	5	5			
		Four	14	18			
		Five	14	23	2	0.44	$>.10$
	2.	One	0	0			
		Two	2	0			
		Three	1	8			
		Four	19	22			
		Five	11	16	2	1.50	.10
	3.	One	0	0			
		Two	0	0			
		Three	3	8			
		Four	16	15			
		Five	14	23	2	2.82	$>.10$
	4.	One	0	0			
		Two	0	0			
		Three	5	10			
		Four	15	19			
		Five	13	17	2	0.64	$>.10$
	5.	One	0	0			
		Two	0	0			
		Three	10	12			
		Four	17	25			
		Five	6	9	2	0.17	$>.10$
	6.	One	0	0			
		Two	0	0			
		Three	10	8			
		Four	12	28			
		Five	11	10	2	5.12	$>.10$

Categories and Ratings		Bridge (N = 33)	Non-Bridge (N = 46)	df	X^2	Sig. Level
7.	One	0	0			
	Two	0	0			
	Three	6	6			
	Four	17	26			
	Five	10	14	2	0.34	> .10
III. 1.	One	0	0			
	Two	0	0			
	Three	8	7			
	Four	15	26			
	Five	10	13	2	1.07	> .10
2.	One	0	0			
	Two	0	0			
	Three	10	11			
	Four	14	25			
	Five	9	10	2	0.74	> .10

TABLE 10.31

Percentage Differences Between the BRIDGE and NON-BRIDGE Groups in Responses to the Field Work Placement Questionnaire

Categories	Bridge (N=40)	Non-Bridge (N=64)
2. Leadership		
Sole Leader	90	35*
Co-leader	0	25
Ass't. Leader	10	40
3. Group's Characteristics		
Size		
2-4	15 }	10 } *
5-12	80 }	41 }
12-20	5	18
Over 20	2	33
4. Membership		
Male	0	10
Female	25	28
Co-ed	75	62*
5. Age Range		
8-9	0	0
9-11	0	3
11-13	30	47
13-15	80	64
18 and over	2	33

* Indicates differences at the .05 or .01 level which were discussed in text

Categories	Bridge (N=40)	Non-Bridge (N=64)
6. Attendance		
Consistent	65	69
Erratic	35	25
Dwindling	0	13
7. Income Level		
Low	70	12
Middle	32	74
High	0	10
8. Housing		
Private Homes	45	72
Tenements	35	12
Co-op Apartments	25	24
City Housing	15	3
9. Religion		
Catholic	35	20
Protestant	48	13
Jewish	15	67*
Race		
All-white	15	50
Inter-racial	50	27
Spanish speaking	12	10
All-Negro	22	13
10. Similar Community		
Yes	35	57*
No	65	43

*Indicates differences at the .05 or .01 level which were discussed in text

Categories	Bridge (N=40)	Non-Bridge (N=64)
11. Conferences		
One a week	80	20*
Every two weeks	8	15
One a month	2	32
Less than once a month	10	30
12. Conferences		
Individual Basis	15	50*
Group Basis	60	25
Both	25	25
13. Conferences		
30 minutes or more	70	24*
20 minutes	15	50
10 minutes	15	33
14. Supervisor's Help		
Normally available	85	90
Rarely available	5	3
Not available	10	7
15. Conferences' Foci		
a. Und. Adol. behavior	70	35
b. Und. role in agency	95	62*
c. Specific skills and leadership techniques	20	32
d. Planning specific programs	52	62
e. Orientation to community	55	30
f. Getting specific suggestions for group	22	36
g. Agency policies, rules, routines	20	42
h. Answering questions I raised	85	78
i. Other	8	5

*Indicates differences at the .05 or .01 level which were discussed in text

	Categories	Bridge (N=40)	Non-Bridge (N=64)
16.	Conference Talking		
	a. Supervisor did most of talking	8	20
	b. I did most of talking	2	0
	c. The time was balanced	90	80
17.	Introduction to Agency		
	No orientation session	5	20
	One orientation session	90	70
	More than one session	5	10
18.	Assignment Clearness		
	First week	25	47 *
	First month	50	42
	Six weeks	10	1
	Two months	5	3
	Never	10	7
19.	Readiness of Agency		
	Yes	95	70*
	No	5	24
20.	Sufficiency of Regular Staff		
	Yes	78	83
	No	20	7
21.	Number of College Students		
	Too many	2	13
	Too few	25	8
	Enough	72	79

*Indicates differences at the .05 or .01 level which were discussed in text

Categories	Bridge (N=40)	Non-Bridge (N=64)
22. Transfer Value		
a. Gave material for course assignments	52	57
b. Added to understanding of adolescents	95	91
c. Add to understanding of self as leader	88	75
d. Had little to do with course material	5	8
e. Was frustrating	15	17
f. Was a waste of time	5	12
23. A. Same Agency		
Yes	90	93
No	10	7
B. How Many Agencies?		
2	10	7
3	0	0
4	0	0
C. Sameness of Field Work		
Yes	50	69
No	50	30
D. How Many Agencies?		
2	30	27
3	5	3
4	0	0

APPENDIX E

Case Study Report

During the first two years, each of the original pupils in the Project classes was the subject of a case study conference. During the third year, thirty names were drawn from the list by means of an agreed-on pattern and these pupils were studied for a second time in conference to examine the changes in behavior and in achievement which had occurred in the intervening period. The schedule of these follow-up investigations was planned so that in no case was this interval between conferences shorter than one year.

As stated in Chapter 2, reports were prepared in advance by the members of the School Project staff including the psychologist. These were duplicated and distributed to all the conference participants for study before the weekly meeting. In the following sample report, entries have been altered sufficiently to preserve the anonymity of the subject.

CASE STUDY REPORT

Project Coordinator
1-15-62

Initial Conference

Lamont, Jonathan 7-1

Born: 3-25-49 NYC CA 12-10

Residence: 1008 Commonwealth Pl. XZ7-0891

Siblings: Older - 1 brother
Younger - 4 brothers
2 sisters

Lives with both parents in Project apartment. Good family relationships. Parents interested in boy's work.

School Experience: Entered school 9-54

P. S. 268Q - Kgn. & Grade 1
314Q - Grades 2 through 6. Never held over.

Confidential File: P. S. 314 teachers complained of chronic disobedience or grudging obedience "with a smirk."

Special Ability: Art

Interests: Art, science, instrumental music, PAL baseball.

Goals: College - Technician in aviation.
("Father wants boy to go to Aviation H. S. Boy wishes to please father, but shows most definite interest in field of science.")

Test Data:

(1st Grade)	4-56	Pintner Cunn.		IQ	109
(3rd Grade)	3-58	Otis Alpha		IQ	103
(4th Grade)	4-59	SRA	Rd.	IQ	96
			Non.	IQ	110
(6th Grade)	10-60	Otis Beta		IQ	101
(6th Grade)	11-60	Met. Inter. Rdg.		W	4.1
				R	5.5
(6th Grade)	2-61	Met. Inter. Arith.	Comp.		5.1
			Prob.		5.0
(7th Grade)	10-61	Met. Ach. Inter. Batt.		W	7.4
				R	7.1
			Spell.		6.0
			Lang.		4.6
			Lang. St. Sk.		8.6
			Arith. Comp.		5.4
			Prob.		5.8
			SS Info.		8.1
			SS Skills		6.1
			Sci.		7.6

CASE STUDY REPORT **Project Psychologist**
1-15-62

Lamont, Jonathan **Results of WISC Testing**
CA 12-5 (at time of testing)

Jonathan was tested 9/22/61; total testing time 105'

Quantitative Results		Scaled Scores			
Verbal IQ	97	INF	13	P.C.	11
Performance IQ	96	COMP	11	P.A.	9
Full Scale IQ	97	ARITH	9	B.D.	9
Rating:	Average	SIM	5	O.A.	8
		VOCAB	10	COD	10
Group IQ (10/60)	101	D.S.	10		

Initially suspicious of the testing procedure, Jonathan warmed quickly, probably because he saw that he would not be threatened but he was able to volunteer comments only moderately related to what we were doing. His responses and his test behavior suggest that he tends to doubt his ability and is cautious in exposing himself, sometimes preferring the sanctuary of a "Don't know" to a real effort. This is also suggested in ARITH where three of his answers which were wrong, were so because they were slight underestimations. He responds to encouragement to some degree.

Jonathan is verbally fluent; many of his verbalizations were rich. He seems probably capable of working at grade level, though possibly he will be defter in social studies and the more creative aspects of English. He probably reads on his own and has a memory for verbal material. INF, his highest score,is quite good, though there are surprising lacunae at a couple of points. His memory for rote material is probably good but he may not be easily induced to make the effort, for his concentration does not seem good. His ability to conceptualize problems is quite variable. On SIM he just appears to have completely missed the boat, or rather, he tried to tackle the problem posed but was unable to carry the similarity process far enough, for a number of his replies are marginal failures. Yet on the Performance materials he is sometimes quite deft and able to learn from experience. Though he sometimes runs into difficulty, he is able to eventually "back off" and try a new tack which is usually successful.

In general social situations, he may have a good grasp of appropriate behavior, though here too there may be gaps. More complex situations may produce inappropriate behavior, but this is quite speculative.

CASE STUDY REPORT **Teacher A**
1-15-62

Lamont, Jonathan

Physical characteristics: Jonathan is a very light Negro boy. He is a little shorter than average and is quite thin, but muscular. He has a very active level of energy and sometimes has difficulty sitting in one place.

Behavior: Jonathan has been a problem to me for quite some time. Not until recently have I been able to reach him. When we began Jonathan was a model student in all respects. As time passed his behavior changed. He became a "wise guy." He answered back, called names, and most of all resented my authority. About two weeks ago, he literally blew up at me and told me that I was the worst teacher he had. I didn't know anything....etc. When I sent him out of the room he said he hoped that he didn't have to come back. The coordinator took him to the office and he told her that I was picking on him and that he was sure I hated him. After he told her this, he decided to apologize to me. I was just thrilled because I really do like Jonathan and I know he has ability. I let him know how thrilled I was with the apology.... I also let him know that I did not stand for his kind of impudence. Since then Jonathan has really been working and producing. I am much happier with this type of behavior and I believe he is too.

Academic work: The boy has capabilities but he hasn't developed good work habits which allow him to attain as much success as he is capable of attaining. He is too fast with the answer, and doesn't stop to analyze what he is doing. He reads well, and has a wide background of interests. He seems to like social studies and is always reading books in this area. He is very interested in science and has decided to make a science project. He is proud when he accomplishes something and very unhappy when he doesn't succeed. Here is one boy who has the ability to go to college. He needs guidance for this and help with his studies. He also needs personal attention as well as encouragement. He tends to "play" too much. One gets the impression that Jonathan is the happiest child in the world. Then when you probe a little more you find he is worried about who he is, and if he will succeed.

Personality: Jonathan feels very superior to the other children because of color. He can be very cruel if he wants to be. He identifies with his teachers and I think often resents being treated like the others. I think this was part of the difficulty between him and me.

I might also mention that Jonathan has discovered girls....He is very concerned about his social life. Nevertheless, last week right before midterms he decided to "give up" girls for studying purposes. He said, "I want to show everyone how well I can do."

Information: I know that he comes from a big family. I met with his mother during open school week. She was sweet, but appeared to have little influence over Jonathan. I learned that she wanted him to go to college, but that she didn't know what to do with him when he played so much.

I feel the boy needs more structure with respect to his work. If need be, we should let him write reports about the books he reads. His written English needs much improvement. He should be able to discuss his plans for the future with someone he trusts. He should be given a special project with limits. By this I mean he should know that he is expected to hand it in at a certain time. He should not be satisfied with a mediocre job. Jonathan needs love with restrictions as well as discipline. I learned that and so did he.

CASE STUDY REPORT

Teacher B
1-15-62

Lamont, Jonathan

Physical Characteristics: Jonathan is a boy who is just in the process of growing rather tall, I think. He is fairly thin, light skinned, and not mature yet. He is quite attractive and well cared for. He has no physical handicaps. His coordination seems normal and his energy level a little bit above normal.

Behavior: Jonathan gets along fairly well with teachers during class. He does his school assignments and homework and follows routines fairly well. However, he does have one characteristic which makes it very difficult to have him in the classroom with other children. He calls them all kinds of names and gets involved in verbal fights during class. When reprimanded for this he becomes extremely hostile and claims, "You didn't see nobody else--did you--you don't know who started it?" Then he gets very nasty and this wastes more class time.

Needs: Jonathan wants to be recognized, I believe, as an independent young man. He requires a great deal of approval for the work which he does. It is usually fairly good. He has mastered most of the tasks which we require. And above all I think he is one of the few pupils who must be treated very independently, but with friendliness.

Academic Work: Jonathan's oral language is excellent. His reading is fair and his writing level is technically poor but is definitely very good in the way of communication. His most difficult problem is coping with spelling words. He can't spell anything. He has a habit of switching letters (does--dose), getting all the letters in, but putting them in the wrong places. He loves social studies, anything to do with social studies. So when we read books, here in class, I make sure he gets something in the field of social studies. He's reading about Indians. He knows a great deal about history. I was very surprised to find one day that he knew about the ancient Greeks, and so on. He knew the order of civilizations in the world; which is far more than I know. I had to look it up and he was correct. He has definite potential. His effort is not uniform. He shows a great deal of effort in certain areas--the ones he likes, and very little in the ones he doesn't like. His persistence again goes according to his interest, as does his accomplishment.

Problem Solving Situations: Here Jonathan is very good. He understands directions. He can set up a problem very well. He draws conclusions well and sees relationships.

Kind of Person: Again, I think that Jonathan is self-confident because of his ability to do work. This makes him very cocky, and the minute the teacher challenges him in any way, he immediately reacts very badly and lashes out. He cannot take any kind of criticism. His self control is very poor. He is quite popular and influential in the group in that the minute he starts, the others will follow. He and Warren Smathers together lead the boys. Jonathan is, however, very good in remembering duties and in remembering to bring things in, and so forth. He washes the boards every day. He does a good job and makes sure he does it. He will help around the classroom. He's offered to bring in cookies and candies for the Christmas party. He volunteers to help out other students at times, and volunteers often to help me. He's good natured, but cocky. An interesting thing happened in guidance the day before I gave the report cards out. We were evaluating ourselves as far as the conduct ratings were concerned. We were making out our own report cards for ourselves, and he gave himself an N in courtesy and an N in self-control. In other words, he knows what he does wrong and he can very well evaluate his own behavior.

CASE STUDY REPORT

Teacher C
1-15-62

Lamont, Jonathan

Physical Characteristics: Jonathan is a very light skinned Negro. He is tall and slender and makes a good appearance. He has recently been more concerned about his appearance and his dress than he was at the beginning of the term. His coordination is good. He is quite interested in sports and excels in them. He doesn't seem to have any physical defects.

Behavior: I've had quite a satisfactory relationship with Jonathan. He has tested me out, but I set very firm limits with him and he seems to have given up. He does all of his work and genuinely loves social studies. All I have to do is mention a possible book that he might like to read and he immediately goes to the library and obtains the book. Jonathan seems to enjoy talking to me when the rest of the class is not there. He tries to put the relationship on a personal level and tries to involve me in what he is doing by strong personal contact. He feels quite free to tell me about his life outside of school. He often tells me about the girls he is going with or what he does outside of school. He seems to be a happy gay child most of the time. When he is reprimanded I notice that rather than sulk or groan, he resolves to improve and actually does.

Jonathan gets along well with the pupils in the class. I feel that he considers himself superior because of his lighter skin and greater mental ability. He often makes wise guy comments to the other pupils which tend to strain his relationship with some of the boys. He definitely seems to be color conscious. I notice that his friends are light and he seems to associate with lighter people.

Jonathan does all of his homework. He didn't do it on one occasion this term. I spoke to him in a severe tone and he never came in without it again. He follows routines readily and in this area is one of the stalwarts of the class.

Needs: I think that Jonathan has a tremendous need to be understood. He seems to go to great pains to tell me why he does things and what he does. He seems to be trying to get me to recognize him and to appreciate the things that he does well. He often tells me about the books he read and seems to get a great deal of pleasure out of just talking to me in the hall.

Jonathan also has a strong need to feel independent. He must be able to work on his own and get a feeling of accomplishment. He has a strong need for approval and for mastery. He has a great deal of perseverence and never hands in an incomplete assignment. Everything he does is well done, well thought out, and he seems to be proud of it.

Academic Work: Jonathan speaks very well, perhaps better than most of the students we have. He speaks in complete sentences with only a trace of an accent. He reads well and enjoys reading whenever he gets a chance. He likes to read in front of the class and show off his ability. The boy works well by himself but I've noticed that he is quite disorganized and often needs direction. I've noticed that his writing is not nearly so good as his speech. He wanders all over the place. His spelling is terrible as is his thought organization. This difficulty exists only on paper. When he functions orally he organizes his thoughts well.

Jonathan's first love seems to be social studies. He reads anything he can get his hands on. He has tremendous comprehension and understanding of current events, a good concept of cause and effect, an understanding of time relationships. He loves history and I'm always giving him books about history. He enjoys looking things up. One day I took him to the Jamaica library and taught him how to use the card catalogue and other tools and resources. He seems to be forever grateful and now utilizes the library more than he had done previously.

CASE STUDY REPORT **Teacher C**

Lamont, Jonathan

I feel that this boy has a tremendous potential and one of my biggest problems is how to take this real love for social studies and direct it into the proper channels.

Jonathan exhibits a tremendous amount of self-confidence and I think that this permits him to work up to his true potential. He understands directions when they are given, and carries them out immediatey. He has tremendous insight into social studies and solves problems well.

Changes: Jonathan seemed to get rude and uncooperative for a time. This seemed to be testing. Since that time he has come around and has returned to the cooperative, attentive, interested, polite child he was previously.

Life Outside of School: Jonathan has a number of brothers and sisters. His mother is a fairly ineffectual, although a very well-meaning woman. I doubt that she has much control over her son.

CASE STUDY REPORT

Project Coordinator
April, 1964

Follow-up Conference

Lamont, Jonathan

CLASS ASSIGNMENTS: 7-1, 8-1, 9-1

TEST DATA: Metropolitan Achievement Tests

	10/61	5/62	5/63	1/64
Word Knowledge	7.4	7.6	7.8	9.9
Reading	7.1	8.0	10+	11.3
Spelling	6.0	9.0	8.7	
Language	4.6	6.6	5.9	
Lang. Study Skills	8.6	10+	10+	
Arith Computation	5.4	5.6	6.1	
Arith Prob. S. & C.	5.8	6.3	7.0	
S. S. Information	8.1	10+	10+	
S. S. Study Skills	6.1	10+	7.6	
Science	7.6	8.4	10+	
X	6.7	8.2	8.3	
Median	6.6	8.2	8.3	

FINDINGS OF ORIGINAL CASE STUDY: 1-62

Behavior somewhat volatile. Inappropriate in complex situations. Occasionally hostile; feels singled out and persecuted. Tends to doubt ability. Cautious. Worried about success. (May relate more successfully to men, since he doesn't sulk with social studies teacher.)

Has good memory and ability to concentrate. Is reliable in classroom situation. Oral English and reading skills are good, while writing is technically poor and spelling ability is low. Tends to be glib. Hampered by poor work habits.

Needs limits, structure, challenge, independence. Needs to establish his identity as an individual, possibly because he feels lost in his very large family.

Suggestions: Motivation and interest are keys. Raise expectations about his performance. Praise good work. Encourage self-evaluation.

CASE STUDY REPORT

Project Psychologist
April, 1964

Lamont, Jonathan

C A 15-O

Test Results and Interpretation

WISC:	9/61	11/63	SCALED SCORES		9/61	11/63			9/61	11/63
Verbal IQ	97	109	(Verbal	Inf.	13	14	(Perf'm	Pic Cmp	11	14
Perf'm IQ	96	108	Scale)	Comp	11	12	Scale	Pic Arr	9	13
Full Scale	97	109		Arith	9	10		Blk Dsg	9	11
				Simil	5	10		Obj Asm	8	7
Rating:	Average			Vocab	10	13		Coding	10	11
				DigSp	10	9				

Pintner IQ 105
Cattell C-F IQ 97

Jonathan has shown a substantial gain on both the Verbal and Performance sections of the WISC, moving from the center to the top of the average range. His functioning on retest is relatively more even on the Verbal Scale than it had been in 1961 and seems to reflect greater comfort in being examined plus specific learning that has occurred since he was first tested. In 1961 his manner suggested that he doubted his ability, preferring to say "don't know" at times rather than risk failure. Even so, he was able then to overcome his initial caution and to accept some encouragement. In 1963 he showed more interest in the test material, and while he was sometimes downcast because he met difficulty in solving a particular problem, he did not appear to be as reluctant and self-doubting as was noted in 1961. Jonathan is verbally fluent, producing multiple responses that are frequently rich and sometimes ingenious. In his work he is generally quick and while not always sufficiently self-critical, he shows persistence and flexibility. It may be that under pressure, he may fail to exercise the care and judgment he otherwise has displayed. It also appears that he is socially alert and adept.

The Rorschach (given 1/63), coupled with qualitative aspects of the WISC, suggests that Jonathan is a bright, alert and responsive youngster. His percepts indicate a much more complex and differentiated personality development than is often seen in this sample. But it also seems that he is anxious and tense, and may often feel very weak and inadequate. He apparently doubts his masculinity and feels torn and damaged. To counteract this, he may adopt a bold and assertive pattern of behavior, arming himself so to speak with the external accoutrements of a manhood he does not feel he possesses. It seems that he has missed a positive, capable model with which to form a sound male identification, but there does not seem to be any doubt as to the direction of his choice. It may be that he mainly experienced his father in a punitive role while receiving little of the affection that would solidify his ability to properly incorporate the male role. An alternative explanation indicates that his father may have been inadequately effective in filling the male role outside the home, which would also have provided a defective model for him. It may be hypothesized that Jonathan will resist male teachers, testing them extensively. Firm but not harsh limits would likely produce a positive response from him. Intellectually he shows good potential, ranging up to the superior level. He is able to effectively organize complex stimuli, often producing original and creative percepts. But he is sometimes inaccurate, which appears to reflect a response to anxiety over threatening feelings or impulses. So he may display poor judgment or impulsive behavior when pressed by anxiety. The Rorschach findings, having been gathered nearly a year before the retesting on the WISC, may be somewhat less pertinent now since his demeanor now suggests some resolution of the doubts and anxieties noted above.

CASE STUDY REPORT

Teacher A
April, 1964

Lamont, Jonathan

Physical Characteristics: Jonathan has grown almost 4" since he was in the 7th grade. He has filled out and appears to be better coordinated than he was in the 8th year. His energy level is not as overwhelming; he is less frenetic than he was in the 7th and 8th grade. He has an excellent attendance record with no absences in three years.

Behavior: I find that Jonathan has calmed down in my class. Especially when I compare him to the other boys and the past years he seems much improved. I used to have frequent periods with J. where he would lose control of his temper and storm around. He is now more settled in his work and more interested in the teaching that is taking place rather than the stimuli from the other children. I find him much improved, and a pleasure to have in class.

J. and I get along very well, and we find we can discuss science and other topics with ease. He has accepted the routines of the class as part of learning and does not try to "buck" my authority in the classroom as he had in previous years. There has been real emotional growth in this boy.

Academic Ability: J. has always been in the 1 class and enjoyed the laurels handed out to the group without putting too much effort into learning. He is a verbally fluent boy, and can pick up ideas easily. I believe he can work much harder than he does, and periodically I see this in science. J. can get 90's if he wants to, by studying. He enjoys science and social studies and excels in these areas. He responds perfectly to individual attention (and enjoys special recognition).

J. has the ability to follow directions, and assume responsibility. He has matured in his realization that education means something. He can verbalize this, and he has future plans for college.

He has more native ability than the tests and class work show. Recently, I have begun to see a definite style emerge. I feel he probably has gained some insights into the work he is doing. Unfortunately, he has not done very well in his other subjects (namely algebra and foreign language). He still has not fully realized that even if a teacher is easy and doesn't demand set rules that he must listen and do the work. He views any form of permissiveness as weakness, and takes advantage of the situation. As a result, the teachers see a boy who fools around and doesn't pass the work. I believe he is coming to the realization of his error a little late.

Additional Information: I have taken J. with me on several trips and he is a pleasure to spend time with. He responds in a mature manner. He wants to feel grown up and act it, and he craves personal attention. He especially needs to identify with a male figure who will take an interest in him and answer his questions.

One area that interests him greatly is entomology. He is an avid reader in science and social studies. His language arts are in need of improvement, but he now accepts this, and wants to do something about it. He profits more from small group instruction than from total class teaching.

CASE STUDY REPORT

Teacher B
April, 1964

Lamont, Jonathan

Physical Appearance: Jonathan is a tall, lanky, light-skinned Negro boy. He walks with a swagger and he would definitely be noticed in a crowd. Jonathan is not well dressed. His wardrobe is limited, but he is always clean. His limited wardrobe can easily be explained by the fact that he is one of about eight children in a family that lives in the low income housing project nearby.

The boy has no apparent physical defects. In the three years that he has been in my official class he has NEVER been either absent or late.

Behavior: Jonathan is one of the most difficult members of his class to handle. He is often insolent--needs to challenge authority. He demonstrates a real rebellion that I think is more than the average teenager's. Jonathan's skin coloring may have something to do with this rebellion.

Jonathan never commits any really serious misdeed. He manages to set a tone in the class at times that is undesirable when learning is to take place. He makes comments on things that happen or what other people say. These are said just loud enough to allow a few to hear. Since these remarks are usually humorous, he evokes a kind of ridiculing laughter in the other students. He might be termed the class clown--but he is a bitter, somewhat pathetic clown. He is a clown looking for recognition and affection, as well as a position of leadership in his peer group.

With all his clowning, Jonathan always keeps within the framework of general routines. He does all of his class work. He listens attentively to every word. He is probably the most apt and frequent participant in discussions.

Jonathan is very conscious of maintaining an important position in his peer group. He is a central figure in the group. Jonathan is also very aware of the opposite sex--yet he is far less experienced with them than many others in the class. At the school dances he rarely, if ever, asked a girl to dance.

In summation: Jonathan is a boy who appears very self-assured on the outside, but is quite insecure on the inside.

Academic Work: Jonathan is not a good English student and he knows it. He is an extremely poor speller. He doesn't believe in punctuation, sentences, or capital letters. Yet, he is a potentially good writer. He has a marvelous imagination, creative attention to details, and a knack of telling a story. Jonathan's excellent sense of comedy shows up brilliantly in his writing.

Although his stories are delightful to read, they are almost illegible. His handwriting is extremely poor. He always writes in pencil. He doesn't write exactly on the line, but the lines slant downward as he goes on. His letters are very large--almost shapeless. The end of the word looks almost like a straight line. It is obvious that Jonathan rushes through his assignments.

He does all his required assignments, both in class and at home, but never to the best of his ability.

Jonathan is an excellent reader--though not a careful one. Reading is one of his favorite pastimes.

His strongest point in English class is his oral work. He is very good at expressing his ideas clearly and succinctly. He also has a lot to say that is worthwhile. His insight into characters and situations in the literature we read is often amazing. He is quick to make comparisons, see similarities, offer possible alternate solution. He seems to have a good understanding of human nature.

Jonathan is a bright boy who is not nearly reaching his potential.

Additional Information:

1. Jonathan's father is very strict and keeps the boy disciplined.
2. Jonathan's father works and has high aspirations for Jonathan.
3. Jonathan has a talent in art--especially cartoons.
4. Jonathan goes to the library often and gets books that teach him how to do things.
   ex. a book on how to draw animals
   a book on building electrical equipment
5. Jonathan's favorite subject is history. He especially likes to read about ancient history--the Romans, Greeks, etc.
6. Jonathan has a fairly new brother. He has to care for the smaller children sometimes--a task he does not seem to mind.
7. Jonathan is very active in sports, especially baseball.
8. Jonathan likes to do extra projects for his teachers whom he genuinely likes--even though he gives them a hard time.
9. Jonathan sulks when reprimanded, but bounces back quickly and without malice.

CASE STUDY REPORT

Teacher C
April, 1964

Lamont, Jonathan

Physical Characteristics: Jonathan is a tall, light skinned boy who seems to be growing at a remarkably fast pace. His coordination remains good despite the rapid growth spurt. He seems to have the usual teenage skin problems, and it gives him a great deal of concern. He tells me that he has been under treatment for acne, but of course this is not always the answer.

Jonathan comes from a family with 7 siblings. They live in the public housing project and seem to be a cohesive family unit. Jonathan tries to dress neatly, but his clothes usually have a very well-worn look.

Behavior: Jonathan's behavior in the room has presented a problem upon occasion. He feels that he must gain the recognition of the group, and he will clown around to do it. If he must be the negative leader to gain acceptance from his peers, he will do this also. At the same time, Jonathan has a pressing need to win the approval and affection of his teachers. When the means to gaining the approval of the group puts him in conflict with the teacher, or vice versa, Jonathan is unable to resolve the dilemma with himself and sometimes must be removed from the situation.

This year Jonathan has presented less of a problem than ever before. This is one youngster who has benefited a great deal by having the same teachers for the three years. He has come to adjust himself in our rooms and feels quite secure. On the other hand, in classes where he finds himself with a new teacher each year, he must prove himself all over again. This is what is going on in his algebra and French classes.

I am quite fond of Jonathan. He is a personable youngster with a quick sense of humor. This year especially, he seems to be anxious to have a good relationship with me. Jonathan must be spoken to and treated as an adult. He must have very firm limits placed upon him. He is also a youngster who flourishes when adequate structure is provided within which he can function.

Jonathan is one of the leaders in the class. He can express himself well, and has a fairly broad vocabulary. The boys in the class look up to him, and will follow him in almost anything he does. The girls consider him part of the "social group" and seem to enjoy talking to him or walking with him between classes.

Jonathan responds to instruction far better this year than ever before. He doesn't seem bent on challenging the rules any more. He seems to have matured to the extent where he can focus himself on graduation, and try to meet the standards set for him.

Academic Work: Jonathan excels in social studies. For a time, the level of his work dropped off, but he is working very nicely at the present time. He does as much extra work as he possibly can. He participates with intelligence in classroom discussions. He seems to have a sense of history, and is one of the few pupils in our classes with good time and spatial understandings.

He enjoys reading in the field of history especially. One finds him most often with biographies of some military hero, a conqueror or a dictator. I think that these books provide vicarious experiences for him. One gets the feeling in working with Jonathan that here is a bright boy champing at the bit to emerge from a fairly drab world.

APPENDIX F

Non-intellectual Factors Related to Achievement in Educationally Disadvantaged Young Adolescents

Robert J. Lovinger
Staff Psychologist

Introduction

As a psychological concept, attention has a long history, although "...the status of attention in systematic psychology has been uncertain and dubious for a long time." (Woodworth & Schlosberg, 1954, p. 72). The relatively static nature of psychological formulations about attention may account for its uncertain status. Freud's suggestion (1911) that attention is one of the adaptive tools of the ego has been followed up by recent work by Gardner and his associates at the Menninger Clinic. Another aspect of ego-functioning is reality contact and while specific dynamic factors in the person's early experience are likely to be of major importance, a child who has experienced a stable physical environment is more likely to be secure in it and to invest his interest efficiently in it than a child who has experienced many changes in his physical surroundings.

More specifically, educationally disadvantaged youngsters who typically present special learning problems in the school situation are believed to have limited capacities to attend in the classroom. Teachers working with these children often complain of their pupils' difficulties in this area. The relatively unstable nature of their life situation is also believed to be an important contributor to their academic difficulties. The purpose of this study was to investigate attention and other variables not directly related to intellectual ability which may have been of particular relevance in determining achievement.

Method

Subjects: The S's in this study included 31 boys and 35 girls, totaling 66 students in three eighth-grade experimental classes in a New York City junior high school located in a lower socio-economic class neighborhood. Of this sample, 92 percent were Negro, six percent were Puerto Rican, and two percent (one pupil) was Chinese. Mean age for this group was 13-8.

Procedure: Two "attention" scores were derived from an "A" or Cancellation test, adapted from Whipple (1924). One of these scores, a Stability score, is based on the amount of fluctuation in the times taken for successive three-line units of performance with the S's actual time partialed out. The other is an Efficiency score computed according to Whipple's formula, involving a combination of speed and accuracy. Three scores that are commonly thought to be at least in part measures of attention were derived from the WISC which had been administered about one year previously to all the S's. These were (1) Cohen's (1959) Freedom From Distractibility factor, taken as the mean of the scaled scores on the Arithmetic and Digit Span sub-tests. Mazes, also part of this factor, had not been administered; (2) the scaled score on the Coding subtest, and; (3) a Digit Span Efficiency score (the algebraic difference between digits forwards and digits backwards). In addition, teachers' ratings of the S's attention, obtained for another study, were included. Scores from four other instruments were also obtained. These were the (1) Barron Ego-strength Scale (1953) which was administered anonymously in groups but secretly coded for identification; (2) WISC Full Scale IQ administered about one year previously; (3) mean grade achievement on the Metropolitan

Achievement Test, Intermediate Battery, Complete, Form B, and; (4) a Residential Stability Scale derived from school records, based upon number of school transfers, and number of address changes in elementary school.

Results

The data has been treated separately for boys and girls because significant sex differences were found on the Ego-strength Scale in favor of the boys ($P < .01$) while differences approaching significance ($P < .10$) were found on the Coding scores (in favor of the girls) and on the WISC Full Scale IQ (in favor of the boys). Also, the pattern of the intercorrelations appeared to be different between the groups.

Tables A and B present the matrix of intercorrelations among the variables in this study, for boys and girls respectively. The attention variables have, for the most part, low and non-significant inter-relationships. Cohen's Freedom From Distractibility factor derived from the WISC shows a moderate correlation with teachers' attention ratings, significant at .01. But the teachers' ratings, which correlate highly with average achievement, seem to be mainly determined by a general achievement factor. Partialling out teachers' ratings of achievement from the r between average tested achievement and teachers' ratings of attention produces a low and non-significant correlation which is .271 for the boys and -.214 for the girls.

School achievement, as measured by standardized achievement tests, is usually found to relate significantly to intelligence measures. As Table A and Table B show, this was found to be the case here. Correlations between mean scores on the Metropolitan Achievement Battery and the WISC Full Scale IQ are significant and moderately high, standing at .652 for the boys and .799 for the girls. A major purpose of this study, however, is to investigate whether other factors, conceptually but not directly related to achievement may also bear upon academic functioning. Table C presents multiple correlations between achievement and the three non-intellectual variables (Attention Stability, Ego Strength, Residential Stability) selected for study in both the boys and girls. Also shown are the multiple correlations between achievement and these three variables with the addition of intelligence scores.

TABLE A

First-order intercorrelations
among the variables for the boys. (N = 31)

	Attn. Stabl.	Attn. Effic.	Dg. Sp. Effic.	Coding	Free. Fr. Dist.	Tchr. Rating Attn.	Ego Strgth.	WISC IQ	Mean Achieve.	Resid.^{a} Stabl.
Attention Stability	1.00	326	-191	238	128	016	114	-064	119	-494**
Attention Efficiency		1.00	081	536*	032	-111	319	232	-091	-309
Digit Span Efficiency			1.00	095	-013	127	234	058	-033	307
Coding				1.00	241	268	216	(510*)	407**	027
Freedom From Distractibility					1.00	559*	132	(416**)	600*	257
Teachers' Rating Attention						1.00	069	522*	851*	434
Ego Strength							1.00	249	148	031
WISC Full Scale IQ								1.00	652*	227
Mean Achievement									1.00	335
Residential Stability										1.00

* $P < .01$

** $P < .05$

a Biserial correlation

( ) Correlated with these sub-tests excluded from WISC

TABLE B

First-order intercorrelations
among the variables for the girls. (N = 35)

	Attn. Stabl.	Attn. Effic.	Dg. Sp. Effic.	Coding	Free. Fr. Dist.	Tchr. Rating Attn.	Ego Strgth.	WISC IQ	Mean Achieve.	Resid.^{a} Stabl.
Attention Stability	1.00	283	191	362**	146	309	401**	354**	364**	173
Attention Efficiency		1.00	106	254	148	-034	-076	189	198	-230
Digit Span Efficiency			1.00	013	-372**	048	-097	-258	023	102
Coding				1.00	201	222	218	(215)	325	083
Freedom From Distractibility					1.00	437*	451*	(579*)	596*	084
Teachers' Rating Attention						1.00	285	600	755	249
Ego Strength							1.00	445*	441*	288
WISC Full Scale IQ								1.00	799*	418
Mean Achievement									1.00	194
Residential Stability										1.00

* P <.01
** P <.05
a Biserial correlation
( ) Correlated with these sub-tests excluded from WISC

TABLE C

Multiple correlations between achievement, intelligence, and non-intellectual variables.

		Att'n. Stability Ego Strength Resid'l. Stability	Att'n. Stability Ego Strength Resid'l. Stability WISC Full Scale IQ
Achievement	Males N = 31	.482***	.740*
	Females N = 35	.487**	.826*

*P <.01
**P <.05
***P <.07

It can be seen that the three non-intellectual variables (Attention Stability, Ego Strength and Residential Stability) show a moderately low relationship to achievement, significant at .07 for the boys and .05 for the girls. Addition of intelligence scores to these three variables produced, as might be expected, a substantial increase in the correlations. Substitution of the other attention measures for the Attention Stability variable in the multiple correlation matrix yields the results presented in Table D. Teacher attention ratings when combined with Ego Strength and Residential Stability produce a high multiple correlation with mean Achievement, but this is barely higher than the first-order correlation between teacher ratings and achievement.

TABLE D

Mean achievement in relation to ego strength, residential mobility and various attention measures.

		Attention Efficiency	Digit Span Efficiency	Coding	Freedom From Distractibility	Teacher Ratings Attention
Achievement	Males N = 31	.369	.409	.528**	.634*	.855*
	Females N = 35	.513**	.443	.504**	.636*	.796*

*P <.01
**P <.05

As mentioned previously, teacher attention ratings are highly correlated with teacher achievement ratings and with average tested achievement. Thus, the high multiple correlation including teachers' attention ratings are probably related to an underlying achievement factor. The Freedom From Distractibility factor and the WISC Coding sub-test score also show significant multiple correlations with achievement in combination with the other two variables. The Distractibility factor for both boys and girls, and the Coding sub-test score for the boys shows a significant correlation with WISC IQ, suggesting the influence of general intellectual ability. The Digit Span Efficiency score, reflecting the discrepancy between digits forwards and digits backwards on the WISC, does not reveal a significant multiple r with the other variables. Whipple's Efficiency score produces a multiple r significant at .05 for girls but not for boys. The meaning of this is not clear from this data.

Discussion

The purported attention measures used in this study show low inter-relationships with the exception of teachers' attention ratings and Freedom from Distractibility for boys and girls. Here, however, ability may have served to confound in part these relationships. The Coding score, which is positively, but not highly correlated to achievement, shows a significant multiple correlation with the other non-intellectual variables, in relation to achievement, as does the Attention Stability score. Similarly, the Attention Efficiency score shows a significant multiple relationship but only for the girls. Thus while intelligence is related to achievement, there is some support for the hypothesis that other variables such as Attention, Ego-Strength and Residential Stability can account for some of the variation seen in achievement.

Summary

A variety of attention measures were administered to a sample of educationally disadvantaged young adolescents, as were measures of Ego-Strength and Residential Stability. Low intercorrelations were common among the attention scores. In conjunction with measures of Ego-Strength and Residential Stability, a new way of scoring the "A" or Cancellation test was found to be of some value. This attention measure is not closely related to achievement, as were some of the measures used. Non-intellectual factors were found to account for some of the variation seen in achievement, although intelligence was still a substantial factor.

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APPENDIX G

Excerpts from Student Teacher Reports

In the weeks before I came to BRIDGE for the first time I was growing more and more uneasy about my choice to go to a special service school. Everyone always spoke with distaste about such a school, prefacing their comments with grimaces.

. . . .

Upon hearing the location of the school, I immediately assumed that it was just another "Blackboard Jungle."

. . . .

One of the most valuable experiences in my student teaching has been the supervision which I have received within the BRIDGE program.... I must stress my appreciation for my cooperating teacher, for her encouragement and suggestions.... The supervision and guidance of the BRIDGE coordinator have been continuous and have included concrete and workable suggestions....I frankly do not believe that, had I worked outside of BRIDGE, I would have experienced so much growth and learning. I believe that instead of being convinced of the achievements which can be made with the children, I might have come away discouraged and depressed, unable to attempt further work with them.

. . . .

On BRIDGE, my lessons were practically "dissected" before their execution. I had help in knowing beforehand what would appeal to the students and what would be over their heads. At the other school, my lessons would consist mainly of a watered-down outline of the treatment in a college text. How good this method was is questionable. This was only found out when the method didn't work on BRIDGE. Only then did the necessity for careful preparation become obvious. It should be said that at BRIDGE preparation was easier because all the materials needed were at hand, and the cooperating teacher and the coordinator were always around and willing to help.... The most helpful experience I had at BRIDGE was being able to evaluate myself by watching the cooperating teacher teach topics that I thought these children couldn't learn. She used methods totally foreign to me, such as the directed reading lesson. I was forced to sit back and realize the limited methods I used. This experience was certainly an eye-opener....On BRIDGE the student teacher sees the team effort in work, is part of case conferences discussing students, and is given an abundance of help.

. . . .

I found my cooperating teacher's help really good. At first we discussed thoroughly what I was going to teach. She and the coordinator got me into the habit of writing lesson plans which I now see the need for.... Now I had to present ideas, help the children discover and form concepts, and reinforce these concepts. Frankly, I was scared at first. What if I really couldn't teach? What if the children didn't like me? The cooperating teacher encouraged me greatly.... The coordinator of this group is about my mother's age and although all the other teachers call her by her first name, I still address her formally. She is an amazing person in that she always has time to be helpful. You can ask her about almost anything.... I have learned from my cooperating teacher that you can be firm

and still have the class like you; you can be lenient and still have good discipline.... They need you most, however, when you are strong.... The teacher should have control of the situation at all times, yet the class should feel free to think. However, no one in college told us that we must be strong.

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